HEALTH CARE MARKETING AT KELLER ARMY COMMUNITY HOSPITAL WEST POINT, NEW YORK

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The author maintains that there may be substantial room and need for the application of marketing techniques in military medical facilities. Such facilities simply do not know, firsthand, the wants, needs, and desires of their patients. Often they react to complaints, outside stimuli, or higher headquarters rather than take a proactive marketing approach to management. This study seeks to determine if the concept of marketing and some of its techniques can be effectively used in the military system to deliver better health care. The answer is yes. By soliciting the needs of the patient population, the hospital administrator can better manage the institution's resources and maximize benefits to its constituents. The author makes recommendations which, if adopted, would foster the relationship between Keller Army Community Hospital, and its patient community.

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I. INTRODUCTION

Background

The military community hospital provides health care services to supported service members, dependent and retired populations based on mission directives issued by their higher headquarters. The specific manner in which a broad medical support mission is carried out is left, to a significant extent, up to the discretion of the local commander. Often times however, tradition dictates the manner in which the mission will be accomplished. Organizations, seeking stability, rely on a continum to direct operations. Thus, the lack of a major force driving change often encourages reinforcement of traditional behavior.

Considering a military hospital as a system one can understand the major dynamics which enter the management process. Janke includes inputs, outputs, transforms, cybernetics and environment as the key components of an organizational system.[1] These components, and the method and means in which they interact are affected by detectors and control devices.[2] They, in essence, control the destiny of the organization through reinforcement, modification or termination of transform activity. These changes, or lack thereof, may be voluntary or incidental, intelligent or autoreactive.

Customarily, the military hospital organization has relied, to a large extent, on the higher headquarters, often removed by several intermediate command levels and thousands of miles, to make many mission/management decisions. Additionally, detectors used to provide the necessary fuel to the control element are keyed to detect stimuli selected by the remote decision makers in central authority positions. On the other hand, local

commanders and managers primarily evaluate mission need and quality of performance based on criteria developed centrally or on past performance. The proliferation of regulations, directives and "guidance" issued by headquarters and at local levels ensures continuity of operations and perpetuation of long held traditional management practices. This is not necessarily bad. Indeed, military organizations, to include hospitals, are subject to rapid turnover of personnel, both on the staff and in the patient population. The adverse affects of this dynamic is held in check to a large extent by the stabilizing influence of well established procedures and lines of authority.

One noticeable systemic shortcoming in the military medical organization is the inadequate (at least to some extent) detection of patient needs and their participation in driving the control/management of the medical system. Detectors sense compliance with tradition based on criteria established within the existing in-place system. In order to avoid stagnation and self-indulgence these systems need the influence of, and feedback provided by those who use the system as customer/patients. Their perceptions, so necessary in fueling a social contract, are key to properly controlling, guiding, and enriching a military health care system. Indeed, there is a social contract operating the medical health care organization. It is therefore essential that attention be focused on the proper role of all the players to include patients, in the milieu. Health care marketing may well provide the impetus to correctly recognize/detect these perceptions and enter them into the systemic process of military organizational management.

The delivery of health care in the military is founded on the preceived needs of the military service as well as on the estimated medical needs

of the population served as envisioned by the Office of The Surgeon General in Washington, D.C. In civilian communities the physicians delivering health services have traditionally dictated the availability and conditions of providing services.[3] Mac Stravic reports that "Where physicians largely dictate demand, their convictions as to what is needed tend to be followed by their prescription of demand. The failure of consumers to return is considered noncompliance and heartily condemned by professionals."[4] It can therefore be said that the operation of health care systems in both the civilian community and the military are both largely dictated by providers.

The proposed application of marketing to the field of health care therefore is a revoluntionary concept. It incorporates ideas and methodologies that have traditionally been foreign to the Health Care setting. The very idea of "marketing" in the health field seems foreign, sinister and sometimes greedy to many observers. Others fear that the introduction of techniques generally considered to be business oriented will degrade the delivery of health services. The American Hosptial Association editorialized in Hospitals in 1977 that "the notion of taking health care to market remains troublesome"[5]. Traditional concepts therefore, are well seated and hard to change. Although marketing is not new, the actual formal organized use of marketing in hospitals is quite new. Kiley reports that hospitals have employed many aspects of marketing over the years, but that few have used it to its full systematic potential.[6]

The confusion and diversity of opinion on marketing generally stems from a misunderstanding of what marketing is. Several authors attempt to clarify the issue but a lack of full understanding of marketing still ensues.[7]

MacStravic states that commonly held concepts focus on:

"The idea of marketing health care as a crass and inappropriate application of a discipline usually associated with hucksterism and products we don't need. It can be argued that health care is something everybody needs, so it doesn't have to be sold. Conversely, it could be argued that we've already oversold health care as a means of maintaining health and undersold personal behavior and environmental factors. Marketing raises images of attractive but deceptive packaging of mediocre products, or loud and misleading advertising convincing us to buy things we don't want or to spend more for them than they're worth. Why should health care get immersed in such a tawdry area?"[8]

An appropriate task therefore is to identify marketing; clarifying what it is and what it is not.

Marketing Identified

Marketing is the management of exchange relationships between various separately identifiable groups.[9] Its mission is to identify the goals, needs, wants and values of target groups. After determining these, the marketing process continues by organizing the resources of the institution in such a manner as to satisfy the needs, wants and values of the groups, thereby facilitating them to attain their goals.[10] It therefore is not a selling program which traditionally decides what the needs of a focus group are and then proceeds to convince the group that it is in their interest to accept what is provided. The seller arranges the resources of the organization in such a manner that there is a convincing process inititated which is designed as a one-way operation. The two-way exchange process does not exist as it does in the marketing milieu. The marketing process however, attempts to align the goals of the organization with those in the focus group, not vice versa. Marketing is more of an orientation and process that attempts to systematically study, plan, and manage exchange relationships.

Kaplan points out several key points on health care marketing that are worthy of mention. Marketing, he notes, is not selling, advertising, gimmicking, or a public relations play.[11] Peter Drucker further separates selling from marketing by stating that marketing eliminates the need for selling.[12] Possibly, it is best to consider selling as a part of marketing.

Marketing programs have traditionally focused on the "The 4Ps"; Product, Price, Place and Promotion. It is a valid question to ask if these have a rightful place in the health care field, particularly in a military environment. As far back as 1977, MacStranic answered this question (for the industry) affirmatively.[13] The health care services provided are the products. Key to the delivery of health care services is the perceived benefit that the patient derives from the health care encounter. Perception, of course, is a critical element as quality and desirability of health care are measured almost entirely on perception. The perception of benefit is a key fuel in the social contract which operates, like marketing, on an exchange basis founded on perceptions. It is therefore paramount, at the outset, that the perceptions involved in the "product" or health care services are the driving force in successful hospital operations and consequently health care marketing. Marketing must key in on perceptions as reality, if it is to be successful.

The "place" element in health care marketing concerns the obvious, where a service is provided, or the path to the service. When alternatives are available to a group, this becomes a major factor. A question that the military health care manager is concerned with is: "Why does an

authorized patient not use this place?" In examining this question, the manager must probe questions relating to time, convenience, and the specific negative and/or positive features of a particular situation. Once again, the importance of perceptions of the "place" are fundamental. Perceptions founded on experience, or secondhand information, form a reality that must be addressed.

Price, often felt to be a taboo, immune from discussion in health care, soared to the top of many priority lists for evaluation. When one considers price as the total of all costs, one must consider direct financial (dollar) costs, indirect financial costs, as well as social costs. The latter may well be most significant for military hospital patients due to the prepared nature of the financial element of the system. The price considerations in civilian institutions are complicated by the roles of third party payers, and spiraling health care costs. Dramatically changing life styles and traditional social roles are also key to this issue. At the outset, one might feel that the issue of price has absolutely no place or merit in the military health care environment. Quite to the contrary, price is a factor. The Civilian Health and Medical Payments for the Uniformed Services (CHAMPUS) Program offers many beneficiaries a largely paid alternative to the utilization of the uniformed military medical treatment facility. The presumption on the part of management that price is not a factor maybe fallacious. Indeed, some people are willing to bear a larger direct dollar cost to avoid what they consider an inordinate social cost. The discriminator, of course, is the perception of how much is too much. Different persons will have diverse views based on their own value systems.

The last of the traditional Ps, promotion, enables the organization to communicate its message to its publics. Specifically, in response to identified needs and wants of those served, the hospital can tell various focus groups how it is meeting or might meet their needs; i.e. what services are available or may be made available.

The four Ps are commonly refered to as the "marketing mix". They are integrally tied to the community and its dynamics. Mages notes that "Hospitals often attempt to maintain high utilization of the beds and equipment they have chosen to provide, without regard for the changing needs of the community."[14] However, hospitals adopting a marketing philosophy of management are concerned with determining what services the potential patient really needs and what policies and procedures will give those services in a manner most satisfactory to them.[15] MacStravic adds that "Marketing, together with sound strategic planning, can help us focus our efforts and our organizations where they will do the most good".[16]

If marketing management sounds like good common sense, that is precisely what its proponents have been saying for years. As a corollary, Kotler predicts that "between 1,000 and 1,500 hospitals of the 7,000 in the U.S. will close in the next five years...one reason they'll fold is that instead of marketing, these hospitals do nothing but pray."[17] It can therefore be assumed that many experts feel that marketing is an imperative for health care management. Legislative actions during the last decade have mandated that health care organizations more closely align themselves with the actual needs of their constituents.

The National Health Planning and Resource Development Act of 1974 (PL 93-641) identified formal national goals and specified that there was a requirement on a local basis, to ascertain the needs of the populac served. Hyman notes that the law "could not only avoid duplication of services and reduce the costs, but, more important, the agencies could be a force in guiding the health providers, particularly hospitals, in reaching out to and providing neighborhoods and specific target populations with needs services."[18] PL 93-641, the cornerstone of health planning has spurred interest in the adoption of health care marketing techniques as an ideal manner of identifying constituents' needs and bringing health service in concert with them.

Military Marketing

With the above in mind, it is reasoned that the marketing of health care is a legitimate and even necessary activity for health care administrators and their institutions. Utilization, resource management and asset allocation all further emphasize the need for aligning the services provided more closely with the perceived needs of constituents. It is noteworthy that one of the largest providers of health care services in the American system, the U.S. Government's Army Medical Department, does not use formal marketing techniques. This tightly controlled system of health care has traditionally done little to solicit empirical data from its constituents for the purpose of incorporating their perceived needs into a planning scheme oriented to change. Although the military needs of an armed forces medical system are integrally tied to the military

mission, this author maintains that there may be substantial room and need for the application of marketing techniques in the Army Medical Department Community Hospital. The basic traditional presumption that a centralized yardstick rule for allocation or management of services is the best, or only way to operate a treatment facility, will likely promote frustration and dissatisfaction at the local level. Statistical reports, based on historical data gleaned from workload charts and expenditure ledgers, tell an often deceptive story lacking the details of what might have happened if things were different. Marketing, if used in military medical treatment facilities management, would allow the administrator to develop a more fundamental understanding of the dynamics of the health care ecosystem that he is involved with. Instead of accepting the month-end, year-end and other reports as final facts, the market oriented manager can attempt a more integrated approach to his analysis. The elements of why people do, or do not like what is provided, or why they choose to use the services or go elsewhere are important. A sugarcoated monthly report showing "achievement of guidelines" or "compliance" with policy is only part of the story. A hospital could conceivably meet all formal requirements of sanctioning agencies and have a poor constituent image. This may well result in substantial resentment and dissatisfaction and some personnel unwilling to use the services provided. Additionally, opportunities to improve service, reinforce excellence legitimately, or make timely modifications may have been missed. On the other hand, a hospital may not comply with certain formal guidelines, but constituents may fully support the organization.

They may be well satisfied and gain the benefit of a full health care program that meets their needs. Management therefore must seize the oportunity to integrate the best elements of both spheres of influence. They are not mutually exclusive.

The point, therefore, is that in the military medical treatment facility we simply do not know, firsthand, the wants, needs, and desires of our constituent groups. Patient needs, as they perceive them, (in the marketing sense) have not been incorporated into the planning process. Often the military medical treatment facility will react to complaints, outside stimuli or higher headquarters directives; however, this author knows of virtually no instances where a marketing approach (pro-active) to management has been adopted. This can be done, it is felt, even with the constraints of a military-readiness mission. The incorporation of actual constituent identified needs into military health care planning and management is not only feasible but desirable.

For mostly unknown reasons, potential patients are choosing not to use the local military hospital for some services that are readily available. This is substantiated by the CHAMPUS Cost of Workload Data Report[19] which indicates substantial payments being made by the government for outpatient care electively received from non-military providers. Additionally, many patients seek authorization for inpatient treatment and hospitalization in civilian facilities as indicated by the frequent requests for "Statements of Non-Availability" that are received. Strange as it may seem, such

statements are often requested for services that are readily available in local military medical treatment facilities. It can be assumed that there are an unknown number of authorized others who elect to use private facilities and services and are willing to pay the full amount from personal funds on a fee-for-service basis.[20] Such personnel are often considered to be complainers who do not know what is good for them. The attitude that, "this is what we offer, on our terms, take it or leave it; we know what is good for you" denies that possible reality of constituent needs or desires different from those of the institution and those in control of a tradition-bound system.

Those patients (or non-patients as the case may be) who seek care outside the miltiary environment may well be a small minority that would never be pleased with the military system. However, we really do not know why they avoid the military medical system and what perceptions they have that the system has not satisfactorily addressed. In adition to those patients who do not use the system, there are those who do use it reluctantly and have their own perceptions based on needs and experience. The perceptions of needs, values and desires of both the users and non-participants should be known, as accurately as possible, if intelligent decisions are to be made regarding services and the method of delivering them to the community. The inclusion of this data in hospital management and planning can only help to facilitate patient satisfaction.

Bearing in mind the above discussion of health care marketing and its traditional relationship to the military medical facility, it was decided that research should appropriately be made to develop and apply

marketing techniqes in a military health care facility. It is felt that conditions are ripe for the military to benefit from health care marketing both from an institutional (hospital) and from a community standpoint. The strong potential for beneficial results useful to the health care manager as well as the user of the system mandates an attempt to incorporate marketing into the health care of the military. As the result of such a study may prove to be a model for future application in other facilities, it is felt that research of this type would have beneficial effects throughout the military health care system by adding new information and extending the body of health care marketing knowledge to include the military.

Statement of the Applied Research Question

The applied research question in this study is: "Can the concept of marketing and some of its techniques be effectively used in the military system to deliver a better system of health care?"

Objectives

This research study has three major objectives. The first objective of the study is to perform in-depth study of health care marketing techniques to include pursuing professional guidance and expertise from sources outside the military environment. This has been accomplished in conjunction with the design of the Graduate Research Project Proposal and the formulation of this chapter. Preliminary literature research, interviews, and marketing analysis provided the foundation upon which this study is based.

The second objective is to systematically develop and implement a modified marketing study in a military medical facility. This includes the sub-objectives of thoroughly researching the available literature in health care marketing; identifying a market segment for concentration, developing a qualitative base and quantitative research instrument for data collection; analyzing the data and making recommendations to management based on the analysis of the data. Lastly, the third objective is to evaluate the pertinence of health care marketing in a military environment based on the marketing experience encountered in the research study. Should marketing be deemed viable, it will include making recommendations for system wide utilization and implementation.

Criteria

The research study must provide sufficient data upon which a qualitative determination may be made as to the appropriateness/viability of health care marketing in a military environment. It must provide the researcher and the institution with a comprehensive bibliography of appropriate health care marketing literature upon which a health care marketing program may be researched. The study must identify a market segment group and perform a qualitative and quantitative analysis of their needs and desires as they relate to their servicing military health care facility. The study must make viable recommendations to management for or against integrating marketing research findings in the management of the hospital. Finally, the study must make recommendations on the applicability of the research on a transferable/broad scale basis in the military.

Assumptions

The author assumes that the U.S. Army Medical Department is not contemplating taking any direct or indirect actions to incorporate health care marketing in the health care system. Additionally, it is assumed that there is sufficient literature resources available in this area to perform an extensive review of pertinent health care marketing writings. It is assumed that the Office of the Director of Institutional Research, United States Military Academy will provide computer support for analysis of statistical data gathered from research instruments during the quantitative phase. The author assumes that there will be cooperation and acceptance of the research effort among the market segment selected for the study. It is assumed that, should the concept of health care marketing be found to be viable, that these findings will be made known to other health care facilities in the military for possible implementation.

Limitations

This study is limited by the finite knowledge of the author in the area of health care marketing and market research techniques. It is further limited by the use of the author as an in-house analyst, rather than using an external researcher, thus ensuring less possibility of bias. The military organization limits the study through severe financial constraints. Most marketing efforts in health care are costly, employing highly trained consultants with years of practical expertise. Thus, with a low budget project of this nature, the quality of the results may not be as high as those conducted by professional analysts. Due to the

limited manpower and support resources, as well as the strictly limited computer support, only one market segment, dependent wives of active duty service members, will be included in the marketing study. No attempt therefore will be made to perform market research, at this time, on other market segment groups. Statistical analysis will be basic due to the limited availability of data collection, computer support and research analysis. It is felt however, that meaningful recommendations and studies can be made despite all the above limitations.

Research Methodology

The objectives of the study will be carried out in a four phase methodology. Phase One: The Developmental Phase, will involve an extensive review of the literature so that the analyst is sufficiently prepared to undertake a formal market research and analysis. Additionally, it will include contact with authorities in the field of health care marketing, both academic and those practicing in the field, for the purpose of soliciting advice and methodological recommendations. Preliminary coordination with the Director of Institutional Research at the United States Military Academy will be affected for the purpose of scheduling computer time and identifying potential population samples for analysis. Finally, the management of the military medical treatment facility, Keller Army Community Hospital, will be briefed and integrated into the marketing strategy.

The Second Phase is the Qualitative Analysis Phase. With the aid of the Director of Institutional Research, a market segment will be identified

and specific samples selected so as to provide a diverse representation of those who have used the varied services and facilities of Keller Army Community Hospital. These samples will constitute a focus group for qualitative analysis. The sample size is to be arbitrarily set at 25 dependent wives based on the recommendation of a renound health care market authority[21]. Members of the focus group will be interviewed, in person, by the author to gain a general knowledge of perceptions, desires, needs and feelings as they relate to the delivery of health care at Keller Army Community Hospital. "Focus groups are, by design, qualitative. No effort is made to quantify people's responses by taking nose counts or by employing check off answer formats... The result is a clear picture of how any service or facility fits into a target group's thinking about health care"[22]. This phase will form the foundation for the third or Quantitative Research and Analysis Phase which will employ a written research instrument. It is important to note that "the key to using surveys is to ground them in the sort of insight provided by focus groups. Only if one already understands the users point of view can meaningful questions be formulated and numerically coded answers be interpreted. The Cardinal Rule of marketing research is to conduct quantitative surveys only after sufficient qualitative understanding has been achieved."[23] Phase 2, therefore will research and develop the qualitative data which will enable the design of a meaningful research instrument to be used in Phase 3. The quantitative research instrument will be developed as a result of the study.

Phase 3, the Quantitative Research and Analysis Phase will involve the design of a research instrument based on the qualitative factors developed in Phase 2. This instrument will be administered by the author to one hundred randomly selected dependent wives. This number may be increased if indicated by the results of the qualitative analysis or if there is an inordinately low response rate to the quantitative instrument. The results of the survey will be quantified using Chi Square frequency distribution and other methods, if warranted. An opportunity will be made available on the research instrument to add non-quantifiable data to the survey. This data will be analyzed and provided to management. The sample size used was recommended by the marketing consultant queried prior to commencement of the study.[24]

After gathering and tabulating the data obtained, a comprehensive written analysis will be made. This analysis will serve as the foundation for the final phase.

Phase 4, The Marketing Plan and Implementation Phase, will focus on writing a series of recommendations to management for action based on the data gathered and analyzed earlier. It is realized that the recommendations made must be compatible with the supra-ordinate requirements and goals of the organization.

FOOTNOTES

[1]Thomas A. Janke, How To Manage Practically Anything Systematically, (Fort Sam Houston, Texas, Unpublished, Academy of Health Sciences, 1980), p. 17.

[2]Ibid, p. 58

[3]Robin S.E. MacStravic, "Market Research In Ambulatory Care," Journal of Ambulatory Care Management 4 (May, 1981), 37.

[4]Ibid.

[5]"Should We Market Health Care?" Hospitals 51 (June 1, 1977): 51.

[6]Patrick J. Kiley, "Marketing Mania: A Brief Look at What The Process Is All About," Texas Hospitals 35 (March, 1980): 10.

[7]Kiley, p. 8.

[8]Robin S.E. MacStravic, Marketing Health Care (Germantown, Maryland: Aspen Systems Corporation, 1977), p. ix.

[9]Kiley, p. 8.

[10]Kiley, p. 8.

[11]Michael D. Kaplan, "What It Is, What It Isn't," Hospitals 53 (16 September, 1979): 176.

[12]Patrick Mages, "Ten Hospital Marketing Myths", Hospital Management Communication 4 (February, 1980): 2.

[13]Robin S.E. MacStravic, "Should Hospitals Market?," Hospital Progress (August, 1977): 57.

[14]Patrick Mages, "Marketing, A Hospital Management Philosophy," Hospital Management Communications 4 (March, 1980): 2.

[15]Ibid, p2.

[16]Robin S.E. MacStravic, "From The Editor", Health Care Planning and Marketing 2 (June, 1981): vii.

[17]Joann S. Lubin, "Hospitals Turning To Bold Marketing To Lure Patients and Stay In Business," The Wall Street Journal 59 (September 11, 1979): 34.

[18]Patrick Mages, "Ten Hospital Marketing Myths", p. 2.

[19]Cost of Workload Data Report, U.S. Department of Defense, Office of the Civilian Health and Medical Payments for the Uniformed Services, May, 1981.

[20]Interview with John Durkan, CPT, Chief, Patient Administration Division, Keller Army Community Hospital, West Point, New York, 21 October, 1981.

[21]Interview with George Rosenbaum, President, Leo Shapiro and Associates, Chicago, 15 September, 1981.

[22]Bobby J. Calder and Judy Bjorling, "Marketing Research for Better Planning: Surveys, Hospital Management Quarterly (Summer, 1981): 12.

[23]Ibid.

[24]George Rosenbaum Interview.

II DISCUSSION

General

The initiation of the marketing study required a substantial commitment of resources to non-traditional activities. As noted earlier, only a partial or modified marketing approach was undertaken. The selection of a market segment focusing only on dependent active duty wives of military personnel was arbitrary and limited. It is acknowledged that there are other very important market segment groups within the patient population, and among the staff members and military organizations supported. It was felt that a study comprehensive enough to perform adequate market research and analysis on all these constituent populations would be beyond the scope of this analyst and the resources to be allocated. In identifying dependent wives as the study group it was felt that they probably best represented the largest and most readily identifiable consumer group which interacts actively with the West Point hospital on a regular basis. This is based on the fact that most wives come to the hospital for their own care, and by and large, accompany their children to the hospital for treament. The active duty member, is by definition, employed in a full time job and most likely has less contact with the system of health care delivery. The retired population served by the West Point hospital is not readily defined nor as pronounced in this geographical region largely due to the cost of living and somewhat hostile climate during a major portion of the winter. With the military requirement that all active duty families assigned to the United States Military Academy (and tennant

units) be housed on post, the problem of identifying population samples was substantially eased. It was deducted that the housing officer would therefore serve as the source for identifying participant dependent wives for the study. This preliminary identification step permitted the study to commence.

The Developmental Phase

In developing the thrust of the study it was necessary to conduct a thorough Graduate Research Project Proposal which required a comprehensive review of the literature. As is seen in the bibliography, a plethora of valuable literature in the area of health care marketing exists, however no discussion of marketing military health care could be found. Early discussions with military health care administrators revealed that there was little or no organizational knowledge of marketing. Some had heard of marketing, most did not know what it was and a few thought that the subject was totally inappropriate for the military and/or a health care delivery organization. Still fewer thought that marketing, in its true sense, probably would be a good thing for military health care. These few executives were the ones who understood the concepts of marketing and were familiar with current literature in the field.

Guidance in formulating the study was provided by Mr. George Rosenbaum, President of Leo Shapiro and Associates of Chicago[1]. At his suggestion the decision to limit the study to military dependent wives was made. Additionally, the sample selection size for qualitative and quantitative

portions of the study were established. It was his feeling that sampling the patient population in this manner would give the commander a good idea of what it is that the serviced population perceives as its' wants, needs, and choices. Furthermore, market research data gathered from this study could be used by management to aid in the allocation, direction and redistribution of resources used to accomplish the medical mission.

Early developmental concepts were discussed and coordinated with the Academy of Health Sciences' faculty representative [2]. After reviewing the literature and conducting early preliminary interviews, the idea of a graduate research study was proposed to the West Point MEDDAC Executive Officer for evaluation. The idea was enthusiastically received signaling this analyst to proceed with the developmental cycle.

In an attempt to provide a viable means of tabulating and evaluating quantitative data gathered by market research, a liaison was established with the Office of the Director of Institutional Research of the United States Military Acadmey. Preliminary arrangements were established to process the data received. Additionally, initial guidance was provided in developing the research instrument.[3]

The four phase methodology employed was established during the Developmental Phase. This provided a systematic means of developing, testing, evaluating and making recommendations. It was realized that no fool-proof or totally accurate conclusions could easily be made, however strong inferences could be made and the concept of a pro-active seeking out of patient input into the health care system was felt to be beneficial. Moreover, it was felt that the time had come for the initiating of formal marketing in the military health care environment.

Qualitative Analysis Phase

This portion of the marketing study was designed to serve as an initial empherical data gathering and evaluation phase. Having conducted a thorough literature research, laid the foundation with management for the execution of the study, it was time to identify a focus group of twenty five dependent wives who would be willing to spend approximately one to one and one half-hours in an interview discussing their perceptions of health care delivery at West Point. These wives must also be representative of the users of the hospitals' services. Thus, coordination was effected with the Chief, Patient Administration Division of the West Point MEDDAC to identify potential members of the focus group[4].

West Point has an inordinately high population of officer families constituting approximately 60.2%. Conversely only 39.8% of the installations' families have enlisted sponsors.[5] Women to be interviewd were selected in proportion to the above population make-up. Additionally, it was felt that all personnel to be interviewed must have been treated at the hospital within the last six months. This ensured that all had knowledge of the hospital and had come in contact with the "system" as a patient participant in a relatively recent time period. As the hospital delivers a diverse variety of services to its population, the requirement was established to ensure that patients serviced by all major medical divisions were represented in the group. Consequently, two outpatient and two inpatient women from the aforementioned mix were selected from those who had used Family Practice Service, OB/GYN Service, Surgery Service, Orthopaedics Service, Internal Medicine Service, and Pediatric Service (with mothers acting on behalf

of their children). One patient using the Community Health Nurse was included.

No patients using Community Mental Health Services were included due to the sensitivity of their treatment and the perceived need for confidentiality for the patient. Further complicating the selection process, was the fact that West Point is composed of two separate and distinct installations' separated by a mountain and fifteen miles. Stewart Army Sub-post (STAS) is located in Newburgh, New York and is serviced by a small outpatient clinic located on that post and by the hospital on the main post.

The West Point population is serviced by the 65 bed Keller Army Community Hospital. Slightly over fifty-six percent of the married enlisted families reside at STAS and approximately thirty percent of the officer's families are STAS residents. Consequently, a sizeable amount of the population serviced lives in a relatively remote location. Compounding this situation is the fact that lower ranking officers and enlisted members and consequently younger families with small children are generally located at the Stewart Sub-post. In order to gain the proper input from this population it was necessary that the individuals represented these groups proportionately. Although it was possible to establish [illegible] traints, i.e, to represent populations proportionately by specific grades [illegible] was felt that sufficient constraints were in effect to gain the end results desired.

Therefore, after an exhaustive effort to develop a focus group of twenty-five women and sufficient alternates, the stage was set to commence the patient contact process.

Initial contact with the perspective interviewees was established by a personal letter sent to each candidate. A sample of the letter is shown in Appendix A. Each addressee was provided with a response form requiring a minimal amount of time to reply. A copy of the response form is shown in Appendix B. Additionally, a postage free pre-addressed return envelope was provided with each letter. It is noteworthy that a word processing machine was utilized giving the impression to the reader that each solicitation was personal and unrelated to a large scale mailing.

The response to the initial mailing was extremely positive. At the end of seven days twenty-two respondents requested interviews; one refused and two did not reply. An additional three women were contacted and agreed to join the focus group. A feature of the interview request was that, at the patients option, the interview would be conducted on any day of the week, during day or evening hours, at their home, or in the hospital. It was hoped that working women, women with small children, and others who might find it difficult to be interviewed during duty hours, would find the conditions of these interviews more acceptable.

The qualitative interviews with the twenty-five member focus group were conducted during the three week period 7-27 March 1982. A working guide was utilized to organize the interview, however, the conversations were open-ended and encouraged frank discussion of all areas of the hospital environment. A copy of the Qualitative Evaluation Worksheet (Guide) is provided in Appendix C.

The guide consisted of five sections. The first portion (I) contained general demographic data which assisted in placing the interview in perspective. The data gathered in this initial stage established such relative points of departure as the rank of sponsor, the number of years that the person had been affiliated with the Army (and therefore the medical system), what services they had used, whether or not they lived at the main post or the Stewart Army Sub-post and how long they had been a part of the West Point community.

This perspective served to allow the analyst a point of departure for further evaluation, if necessary. Should problems develop it would be more meaningful in addressing them if the demographics of who was affected was established early on. This proved to be the case with unique difficulties, to be addressed later, which arose with those users of the health care system who resided at Stewart Sub-post.

In order to keep a marketing orientation the guide was then divided into four sub-sections under the category, Respondents Opinion (II). These four areas addressed the four Ps' of the marketing mix. Section IIB dealt with the "product" aspect of West Point health care delivery and how they relate to the perceived needs of the patient. A concerted effort was made not to suggest needs, areas of concern or problems to the patient. The variety, quality, manner of delivery,, alternatives to the care provided and staff aspects of "product" were discussed in detail.

Interviews then focused on the "place". Keller Army Community Hospital occupies a new facility equipped with superb interior design features and patient confort items. In addition patients are treated at the Cadet

Health Clinic Building which houses the Mental Hygiene Consultation Service, Optometry Service, and the Physical Therapy Service. These three activities are housed in the Cadet Health Clinic Building due to the high demand for them by members of the United States Corps of Cadets, however, they are utilized on a regular basis by the rest of the patient population, although to a lesser extent. Finally, patients are treated at the U.S. Army Health Clinic located at Stewart Army Sub-post. Interviewees were queried concerning the physical set-up, accessibility, waiting times for both appointments and in clinic waiting rooms, and the need for services to be provided at non-traditional times and places.

Bearing in mind that military health care is largely pre-paid and considered to be an entitlement or at least a part of the military compensation package, dealing with price was a somewhat difficult task. Although monitoring price was discussed, the emphasis for this group was on social costs. Alternatives to obtaining care at the West Point MEDDAC and the costs involved, both financial and social, were examined.

The last area addressed in the guide was that of promotion. An attempt was made to determine how patients preceived the hospital in relation to the community. Specifically, the hospital's ability to communicate and what they felt the hospital should be doing to foster communication. The interviewer then focused on the patients needs for communication as reported from the patient's viewpoint.

In closing the interview, the guide provided an opportunity to gain insight into any other area that the patient desired to talk about. Suggested

questions focused on what features a person liked most or least about the hospital.

Patients were encouraged to be candid in expressing their opinions. It is felt that all were very honest and forthright in discussions. Virtually every person granting an interview was happy to have the opportunity to participate in a study of this nature. Although the ideal time for conducting an interview was planned to be between 45 and 60 minutes, twenty interviews (80%) lasted approximately one hour. Two interviews were thirty minutes, while the remaining discussions were terminated at 90 minutes.

Results of the Qualitative Phase

The purpose of the interviewing process of the qualitative phase was to develop a base from which quantitative questions and analysis could be formulated. It therefore provided the fundamental feelings and perceptions of the focus group relative to health care delivery at the West Point MEDDAC. Although no attempt was made to specifically quantify the results of the interviews, patterns of responses evolved within the group pointing out areas of concern, both positive and negative, which merited further evaluation. It is important to note that the marketing effort was seeking to determine needs and wants for both unprovided and currently provided hospital services or activities. Thus, an effort was made to cover the full spectrum of current activities and those functions that we were not engaged in.

As a result of the interviews, an intensive study was undertaken to determine what exists, why it exist and if what was found was meaningful and worthy of further study. An attempt was made to eliminate irrelevant data with little bearing on the study. Observations noted, both positive and negative, were discussed with the personnel within the hospital who supervised the areas concerned. At this early stage of the study, the effort was primarily a preliminary information distributing task. However, a situation was brought to the interviewer's attention involving a physician on duty in the emergency room. When a women in labor presented, he proceeded to the OB Service to deliver a baby, thus leaving the emergency room unattended. This pointed out a managerial problem, as yet undetected, that could have had very serious consequences if a seriously ill patient was presented for treatment at the emergency room during such a circumstance. It should be noted that the sharing of information at this preliminary stage was provided only as interim data and was not presented as a final finding.

After discussing the initial findings with the various department heads and supervisors, a series of questions were developed to serve as the basis for a wider assessment of patient's attitudes which would be tabulated for quantitative analysis. The twenty-four questions were therefore based on issues and topics raised by the women in the focus group. They did not reflect the desires of the analyst or requests received from hospital staff personnel.

Make-up of the Research Instrument

As the quantitative survey instrument was to be sent to people whose names were to be selected from the housing lists of the Engineer and Housing Division, it was felt that it should address patient's perceptions in the context of their familiarity and level of experience with the MEDDAC. Thus, the first question focused on determining what type of services a patient had used, if any. The women were asked if they had been a patient and if so, what type, during the last two years.

As most women queried in the qualitative phase made a point to express their strong satisfaction with the variety of services available in the hospital, it was felt appropriate to determine, in question 2, how widely held this feeling was. If the answers were strongly positive it would indicate that the patients perceived need for a variety of services was being met.

Some patients expressed concern with parking at Keller Army Hospital (Bldg 900). Several womens' feelings were adamant. It was known that some staff members, primarily members of the medical staff, were routinely parking in the patient's parking lot located in close proximity to the clinic areas. When the lot becomes full, patients are forced to use the relatively inconvenient staff and overflow lot for parking. It was therefore appropriate to test, in question 3, the patient's feelings, on a broad basis, on this issue.

One of the most frequently criticized or praised areas of almost any acute care hospital is the emergency room. It is the point of contact for people entering the system under extreme pressure, injured, sick,

and at all hours of the day and night. Many patients expressed high praise and some related misgivings about experiences in the Emergency Room. Many opinions were charged with emotion. It seemed appropriate therefore to include, as question number 4, the patients opinion of the care and service received in the Emergency Room.

An area that drew high marks for courtesy and low grades for speed was the Pharmacy. As a high percentage of outpatients being seen at the hospital have prescriptions filled, it was felt important to find out, in question 5, how the Pharmacy was fulfilling the need for its "product" delivery.

Upon entering Keller Army Hospital most visitors are struck with the high degree of cleanliness in the building. This is enhanced by the modern building design and the excellent interior lighting. It was noted, however, by several women who were inpatients that their hospital rooms were not satisfactorily maintained in a clean and hygienic condition. This problem was confirmed in conferences with ward staff and therefore felt to be of sufficient magnitude to be included as question 6 of the survey.

A problem mentioned by a large number of women interviewed was that of their medical records not being at a clinic for a routine scheduled appointment. It is noteworthy that even though no reference to this type of problem was included in the guide, it was frequently initiated by the patient. Many patients included the medical records problem in those things that they like least about the MEDDAC. Based on this input question number 7 addressed the availability and delivery of ones' medical record to a clinic for their appointments.

A number of women felt that due to their work, small children at home, lack of transportation or for other reasons, they would like to have some limited evening clinical appointments. Question 8 therefore asked specifically whether or not the patient would use evening appointments, if offered. It sought out a definite commitment, as well as providing a less committed alternative saying that one might use the services. A negative alternative was also provided.

During the qualitative interviews, three women stated that they had used the Physical Therapy Service. All three patients had very negative and emphatic feelings about its' personnel and operations. Although only three persons complained about the Physical Therapy Service, it was significant, when, after checking the records, it was determined that they represented 100% of those in the sample who had used the service. It was therefore concluded that question 9 relative to the Physical Therapy Service, be included. It was known, at the outset, that a strong possibility existed that only a few persons in the market segment to be queried would possibly have utilized the clinics' services. The patients primarily using Physical Therapy and Cadets recovering from orthopaedic injuries.

Currently, there is a strong interest in health promotion activities in the United States. The literature is full of wellness activities reported nationally. During the interviews many women questioned why the hospital did not have a more positive (pro-active) program of wellness functions. A strong interest was expressed in nutritional classes, group sessions, diet planning and sports related medical programs. In order to determine how strong the need for these "products" was, question 10 was developed for the survey.

Many positive comments by those interviewed concerned the professionalism of the staff. It was noted however, that during several interviews, unbecoming behavior reflecting on professionalism was reported. In order to assess this situation and determine the perceived quality of the staff, question 11 was included. This was felt to be a good feedback source for physians, nurses and para-professionals.

Patients who had been hospitalized repeatedly reported that the food service was a high point of their stay in the hospital. As this is often a controversial topic, it was felt that it was appropriate to see if the preceived fulfillment of this patient need was as widespread as detected during the interviews. Question 12 addressed this point.

West Point initiated a Family Practice Medicine Service in 1981. Throughout the interviews those patients who participated in the Family Practice Program seemed to be noticebly more satisfied with the care that they and their families received than those not in Family Practice. Question 13 therefore was included to determine whether or not a person was in the Family Practice Service, and if so, to what degree were they satisfied with the care that they received. Additionally, this question would serve as a point of segregating all the questions for analysis into the categories of those in Family Practice and those not participating in the program. It was felt that this two-way analysis may be appropriate to determine if survey respondents in Family Practice would also be more satisfied with many aspects of the MEDDAC's health care program than those not participating, as had been noted in the qualitative analysis.

Patients being interviewed seemed to have strong feelings regarding a need for better and more frequent communications between the hospital and the serviced community. Suggestions were made to conduct routine orientation tours and open house days, prepare brochures on the hospital and clinics, listing the services and explaining procedures involved in obtaining care, and for more public affairs articles in the installation newspaper, The Pointer View and the weekly USMA Bulletin. Question 14 and 15 addresed this perceived need and provided the respondent an opportunity to select the preferred method of communication.

The Chief of the Clinical Support Branch has the additional duty of being the Patient's Representative. In this capacity he is to be the patients' advocate and serve as the central point for patient complaints and suggestions. During the interview process patients discussed shortcomings, difficulties, and problems that they had encountered from time-to-time at MEDDAC activities. Each individual was asked if they had sought assistance or filed a complaint. Surprisingly, a significant majority of the respondents indicated that they did not know where to complain or how to enter the "system" for help of this nature. Accordingly, question 16 sought to determine how widespread this situation was so that appropriate action could be taken, if warranted.

At the end of page 4 the questionnaire provided the respondent with an opportunity to discuss any topic of interest to that individual. This non-quantifiable response area was assigned question #18.

It became vividly evident to this analyst that the perceptions of West Point residents and those living at Stewart Army Sub-post were quite different. Their basic needs were significantly different due to the geographical separation of the two installations and the level of care provided at each post. Stewart residents had unique problems and needs not faced by the West Point Community that required further analysis. Questions 19 through 24 were added to address these problems and were to be answered only by STAS residents. Pages 5 and 6 therefore were not mailed to West Point residents.

During the interview conducted with residents of Stewart Army Sub-post, many women expressed dissatisfaction with the general outpatient physician services available at the health clinic. Some indicated that they would either drive to West Point for care of forego the treatment. For this reason it was appropriate to ask the STAS residents where they went for health care services in question 19.

Many of the Stewart wives who were interviewed expressed an interest in having Family Practice medical services extended to the STAS Clinic. Additionally, several Stewart women felt that the services at STAS were inadequate and that better trained and more proficient practitioners would be a positive addition to the Stewart Clinic, thus filling a strong "product" need. Based on this, question 20 asked Stewart residents if they felt a need for the commencement of Family Practice medicine at Stewart.

family or pediatric care. Some indicated that more convenient clinical schedules which include evening hours of operations would be a positive addition to the health care system. Most felt that such evening hours were necessay due to the geographical isolation of Stewart Sub-post and the requirement for their spouse to be located at a relatively distant work station throughout the clinics' hours of operation. Thus, it was appropriate to ask question 24 in an attempt to determine how wide spread the perceived need for evening clinic hours was.

Although the quantitative results were to later provide numerical findings, this analyst noted that the vast majority of those interviewed at this stage felt that Keller Army Community Hospital was the best medical treatment facility with which they had been affiliated, either military or civilian. Of particular note was the universally favorable response by those partaking of Family Practice Medicine Service. It seemed that those participating in this service had an overall better perception of the health care providers and had a higher degree of need satisfaction than those not in Family Practice. This finding was significant particularly due to the relatively recent inception of this service at West Point.

Quantitative Research and Analysis Phase

With the patient survey contents established, preparation was made to distribute them to one hundred dependent wives of the West Point military population. Based on the proportions of officers and enlisted personnel

While setting up the interviews with STAS personnel during the qualitative stage, all Stewart residents requested that their interviews be conducted at their homes. It became clear to this analyst after negotiating the treacherous Storm King Mountain separating West Point and the sub-post that transversing the 15 mile distance was no easy matter. The roadway was frequently covered with fog reducing visibility to almost zero. Additionally, the winding route to and from Stewart is often laden with ice and snow for up to six months of the year. Consequently, the residents residing at STAS avoided making the trip to West Point unless absolutely necessary. Question 21 therefore asked if the physical separation of STAS and West Point prevented the individual or their family from obtaining proper health care. The results of this question, it was felt, would provide pertinent information on the basic availability of fundamental health services.

Many STAS wives felt that there should be periodic specialty clinics conducted at the Stewart Health Clinic. Among those requested were OB-GYN, Family Practice and Internal Medicine. Questions 22 and 23 therefore were included to address these needs and to determine the extent of interest in such services.

Stewart wives interviewed were frequently mothers of small children. Their husbands were often working at West Point and drove the only family vehicle to work, thus leaving their spouse without transportation. In such cases wives reported that they could not get to the clinic or hospital and often resorted to the use of the Emergency Room at night for routine

assigned to family housing at the main post and Stewart the following distribution scheme was used:

	Officer Wives	Enlisted Wives
West Point	47	17
Stewart Army Sub-post	14	22
	61	39
		n = 100

The above sample distribution takes into consideration that 64% of all housed families live at the main post with a corresponding 36% living at STAS. Of those at West Point 73.4% are officer families with the remaining 26.6% senior enlisted families. At Stewart only 39% are officer families (mostly junior officers) and the 61% are enlisted families with sponsors ranging in grade from E-2 to E-7. No further effort was made to make the sample representative.

Due to the findings in the qualitative phase, it was deemed appropriate to analyze the quantitative data from three perspectives when appropriate; frequency distributions of the whole sample response, cross tabulation of the responses provided by the two geographical groups affected (West Point main post and Stewart Army Sub-post), and a comparison of the responses provided by those participating in Family Practice as opposed to those not participating. Only those areas felt to be remarkable will be addressed in this study and only tangible results will be included in recommendations to management.

Patient survey questionnaires entitled "Dependent Wives Questionnaire, West Point MEDDAC, March 1982", were forwarded to dependent wives selected from the housing roles as of 29 March 1982. The questionnaire sent to each woman is shown in Appendix D. Each addressee was sent a personal letter prepared on a word processing machine and signed by the MEDDAC Executive Officer. A sample of the letter is shown in Appendix E. The questionnaire sent to each women is shown in Appendix E. Each individual was given an addressed return postage paid envelope to make their reply easier. Packets were mailed 31 March 1982. A period of ten days was allowed for responses to be received at the MEDDAC. Responses received after that date were not quantified.

Of the 100 questionnaires mailed out seventy-six were returned within ten days. Of the seventy-six, fourty-eight were from West Point residents and twenty-seven were from STAS. The response rate correlates closely with the sample distribution in that 64% of the population lives at the main post and 36% at Stewart. Of the seventy-six respondents 63.2% were from West Point residents and 35.5% lived at STAS. One respondent indicated "other" with the comment that she had lived at both, and "STAS was lousey."

In assessing whether or not respondents had utilized the MEDDAC's services during the past two years, 94.7% had used the hospital. Sixty-seven and one-tenth percent were seen as outpatients, 1.3% were inpatients and 26.3% were both outpatients and inpatients. Only four patients, one from West Point and three from STAS had not been treated at all within the specified period. This allows the analyst to conclude that those who responded are familiar with the MEDDAC and its' services to a large extent and have, in the most majority of cases, participated in the health care

and Stewart residents, whether in Family Practice or not, feel that parking is a problem at the main hospital. With this strong perception, it is appropriate for management to address this problem.

The Emergency Room was reported to be excellent or satisfactory by 91% of those who had used it. A surprising 28.9% of the respondents reported not having used the Emergency Room. The data indicates that no significant differences exist in perceptions between the two analytical groups. The 91% satisfaction rate is made-up of an adjusted "excellent" rating of 37% based on n of 54 (excludes those not using the system). Management should address this issue as the Emergency Room is frequently the first point of contact with the public for the hospital and it's actions convey a large portion of the public image to the community.

The Pharmacy Service question, number 5, raises significant attention to need management review. Of those who have used the Pharmacy (n=70) only 17.1% rate the service as excellent. Sixty-five percent of the respondents rate the service as satisfactory and 18.6% felt that is was unsatisfactory. This is the highest unsatisfactory rate noted for any question in the study. Written-in notes on the questionnaire indicated that excessive waiting time was universally the cause for dissatisfaction.

Further analysis of this question reducing the results to a 2 x 2 Chi Square problem, combining excellent and satisfactory, v. unsatisfactory against the residential location and later the family practice membership, revealed no statistical significance at the P=.05 level. The assumption

delivery process at West Point. The two-year time parameter ensures that the reference point for assessing the questions presented is relatively recent and therefore relevant to current managment analysis.

In response to question 2, the vast majority of participants surveyed were satisfied with the services provided by the MEDDAC. Their basic needs were being met. Three people indicated a need for more otolaryngology service, a form of medical care currently available only on a part-time basis. This supplements data gathered in the interview phase. In computing a 2 x 2 Chi Square Analysis, eliminating those who were not sure, the expected values for those who live at West Point and Stewart were the same as those found in the survey. Similarly, the expected values for those in Family Practice v. those not in that service were equal. It is therefore concluded that there is no significant difference between the perceptions of West Point or STAS residents concerning the variety of services provided. Similarly, no difference exists in the perceptions of those in Family Practice as opposed to those not in that service.

Question three indicates that a sizeable proportion of people see parking as a problem at the hospital to some degree, however a majority (54.7%) indicated that it was no problem. In analyzing the West Point v. STAS respondents, combining responses a and b, indicating that there is a problem and deleting those who have not visited the hospital by car, there is no significant (at P=.05) difference in their perceptions. Similarly, the Family Practice participants had the same percepitons as those not in the service, once those who had not visited the hospital by car were deleted. It can therefore be stated that approximately 41.3% of West Point

can be made therefore that the frequency distribution results apply uniformly to the population.

In examining question six it is apparent that the patients feel that the hospital is clean. As only one respondent felt that the cleanliness was unsatisfactory, no further action was deemed necessary, except to emphasize to management that those sampled are quite satisfied with the cleanliness of the facility. As it is postulated that patients have a need for a clean and hygienic environment in which to receive health care, the West Point MEDDAC seems to be fulfilling this need superbly.

When questioned about their medical records (question 7) patients felt only 67.8% of the time that their records would be at the clinic for their appointment. An additional 28% felt that they could not rely on the records being at the clinic but that they might be there. Only 4% or three respondents related that their records were "usually" not in the clinic for their appointments.

In reducing the question to analysis in a 2 x 2 Chi Square format examining response 1 v. 2 in the context of West Point v. STAS and the Family Practice question, no statistically significant difference existed at the P=.05 level. It can therefore be stated that the perceptions noted earlier are held by the population at large.

The rather large number of people feeling that they cannot rely on their medical records being at the clinic indicates a need for management to address this issue. The medical record "problem" was mentioned frequently in the qualitative phase, by respondents, as a source of frustration and dissatisfaction with the "system".

When questioned (in question number 8) whether or not they felt a need for evening clinical appointments, 67% felt that there was a need. There was no difference of statistical significance between the two geographical sub-populations, nor between those in or not participating in family practice, when reducing the data to a 2 x 2 Chi Square analysis combining those indicating that they would definitely use the evening clinics and those who said that they might use them, and contrasting them with those who said "no". Thus, it can be stated that both at West Point and at Stewart, there is a perceived need for evening clinics to some extent. Management should address this question due to the strong feelings within the population.

The results of question 9 concerning the Physical Therapy Service were inconclusive as only thirteen respondents had used the service. It is therefore recommended that further study in this area be conducted in the future, addressing a more appropriately identified focus group and population sample. This would allow a further evaluation of the qualitative data gathered in this area during the interview process.

When asked if they would attend or participate in wellness activities if the hospital were to offer them, 75% stated "yes" or "maybe". This indicates a strong interest in a pro-active approach to community preventive medicine. Supplemented by the data gathered in the interview process, this analyst feels that the strongest subject for this response is in the area of nutritional activities. The Chi Square indicates that no significant difference in the responses of West Point and Stewart residents with the

level of significance =.5937. However, when the questions were answered by those in Family Practice Service there was a significant difference (P=.0297). Those participating in Family Practice felt a much greater interest in wellness activities. This may be due to the more holistic approach to medical practice shared by the practitioners and their patients.

Based on the above observation, the command of the West Point MEDDAC should take action to address this need expressed by the respondents.

Question 11 asked respondents to rate the professionalism of the staff. There was no further clarifying data provided to the individual in an effort to gain a feel for the person's overall impression of the MEDDAC rather than focus attention on one provider. The results showed that 38% of those with an opinion felt that the professionalism of the staff was excellent, 56.7% felt that it was satisfactory. Only 3 respondents or 4% of those with an opinion felt that professionalism was unsatisfactory.

Rather than feel that the large "satisfactory" rating is acceptable, it may be appropriate for management to ask why only 38% felt that the staff was excellent. Medical practice provided by health care professionals, should be delivered in a professional manner and should be perceived as such by the population. The fact that the frequency of excellence is not higher should be addressed by management and brought to the attention of the providers. Professionalism is presumed to be a requisite aspect of health care delivery.

When examining the data in a 2 x 2 Chi Square analysis comparing "excellent" responses against "satisfactory" responses there was no significant statistical observation with regard to geographical location or Family Practice participation. The problem, if there is one, therefore, is perceived throughout the population.

Question 12 regarding Food Service at the hospital drew an insignificant response from the sample. Sixty-seven and one-tenth percent of those questioned did not eat at the hospital. It was noteworthy however, that, of those who did eat, no one said that it was unsatisfactory and 32% rated the food service as excellent, while 64% indicated that it was satisfactory. It is recommended that further study in this area be conducted with a focus group of former inpatients. This will provide meaningful data upon which more conclusive action may be taken, if appropriate.

The Family Practice medicine service received high marks in response to question 13. Of those participating in that service 71% indicated that they were very satisfied. Twenty-six percent rated the service as somewhat satisfactory. It should be noted however that the 26% (9 respondents) included four individuals who wrote notes expressing concern over the temporary absence of their physician on a temporary duty assignment. This situation has been rectified by his return. The one person "unsatisfied" stated her answer for the same reason. It is noteworthy that the vast majority of persons participating in Family Practice are West Point residents. Seventy-four and one tenth percent of the STAS respondents indicated that they were not participants in the program as opposed to only 43.8% of the West Point residents.

This highly satisfactory service is therefore disproportionately used by West Point residents. It can be assumed that, due to the lack of this service at STAS, Stewart residents are unaware of the availability of Family Practice membership or find travel to the main post too far to travel for participation. However, when relating this to question 15, (for STAS residents only) "Is there a need for Family Practice at STAS?" 55.6% of the STAS residents said yes. Also, examining the results of question 19 which asked STAS residents where they go for their health care needs, only one person indicated STAS Health Clinic exclusively. Twenty-five and nine tenths percent indicated that they go to the main post hospital and 66.7% indicated that they use both. The latter question indicates that most people travel to the main post for at least some of their health care. From the qualitative interviews, this analyst found that the respondents use the services of the STAS Clinic Pediatrician for their children's routine appointments, and try to use the hospital for other services. Additionally, many families indicated that they did not know about Family Practice services at Keller.

These findings confirm management's need to address the question of Family Practice services at STAS and the form the delivery of these services should take.

Question 14 asked the women if the MEDDAC should do more to orient the community. Of those with an opinion, 83.3% answered affirmatively. It is noteworthy that the Stewart community had a statistically more significant need for communication than West Point. This was analyzed

by deleting those with no opinion, and performing a Chi Square test, at the P=.05 level, on answers "a and b", "yes" and "no". This confirms the data gathered in interviews by this analyst (at STAS) during the qualitative phase. The isolation of the Stewart Community has fostered this need which should be addressed by management.

When examined, there was no statistical significance (at P=.05) in the response to question 14 by members of Family Practice Service as opposed to non-members. Thus geography, and how management addresses it, is the problem of interest that must be addressed in dealing with this question.

Of the respondents who answered affirmatively to question 14 over 70% indicated a need for more public relations and information articles in the Pointer View and the USMA Daily Bulletin. Smaller percentages indicated a preference for tours and open house days (15.9%) and descriptive brochures (13.6%). These results indicate that articles in the newspaper or bulletin would be appropriate particularly if addressed to the Stewart Army Sub-post community. This is in agreement with the interview phase, as every interviewed dependent wife indicated that she read the Pointer View and the weekly USMA Bulletin. No futher analysis of this question was deemed appropriate.

The questionnaire asked, in item 16, if respondents were aware of where to go if they had a complaint or suggestion regarding the MEDDAC. This question concerns the publics' perception of the role (or existence of) the patient representative (Chief, Clinical Support Division.)

Only 48% of the respondents indicated that they knew where to go in such a case. There was no significant difference in perception by either the geographically different groups or those in, or not in, Family Practice. The results indicate therefore that there is a definite need for making the role of the patient representative known by publicizing, to patients, where to go and what to do if they have a complaint or suggestion.

The patients completing the questionnaire were provided the opportunity to include qualitative data in their responses by completing the space provided in question 18. Of the 76 respondents who returned the survey, 32 provided written comments. Twenty-two of the women expressed appreciation for the hospital and being able to participate in the study. Three contained complaints which were specific and not pervasive in nature. These were referred directly to management for action. The remaining responses amplified the quantitative data already gathered. It is felt that this was a worthwhile question particularly due to the gratifying responses which were so positive toward the hospital and the opportunity to cooperate with the organization.

Six additional questions were provided for Stewart Army Sub-post residents only. The results of questions 19 and 20 have been previously addressed in the discussion of question 13. As the number of respondents from STAS was only 27 (n=27), it was not possible to draw significant findings between those in Family Practice and those not, however descriptive statistical observations of frequency distributions revealed meaningful data.

When asked if the physical separation of West Point and Stewart prevents "you or your family" from obtaining proper health care services, 22.2% answered yes that it was a significant problem and an additional 48.1% said that it was a minor problem. Only 22.2% answered that the separation was not a problem. This reaffirms the need for management to examine the health care services provided at Stewart Army Sub-post.

When talking with the wives at Stewart this analyst repeatedly heard a plea for periodic specialty clinics at STAS. This was reaffirmed in the answers to question 22 where 100% of those with an opinion stated that there was a need. There were no negative responses. Question 22, allowed the women to specify one such specialty clinic. Those with an opinion asked for OB-GYN clinic 47.8% of the time while 43.4% indicated a need for Family Practice. As Family Practice can provide most OB-GYN services, the latter specialty clinic would fulfill both needs. It is appropriate therefore, that management address the question of specialty services at STAS on a periodic basis. The need for such services has been emphatically expressed.

When queried whether or not evening clinic hours at STAS were needed, of those with an opinion, 84 percent said yes. This coincides with the observations made earlier regarding Stewart wives who are left home without transportation and find it difficult to get to the clinic or hospital during duty hours due to the spouses absence, with the family car, at West Point. These observations further substantiate the "problem" of medical support to Stewart families.

The results gathered in this quantitative stage provided the basis for making recommendations to the command which reflect the needs of the patient (dependent wives) community as they see them. Specific proposals to management are contained in the Marketing Plan and Implementation Phase.

The Marketing Plan and Implementation Phase

Based on observations and deductions made during the qualitative and quantitative parts of the study, recommendations for management are proposed which reflect the perceived needs of the dependent wives population of the West Point and Stewart Communities. These recommendations are in keeping with maximizing patient care satisfaction while maintaining high standards of medical practice.

Recommendations

1. It is recommended that the Commander, Keller Army Community Hospital notify all staff members of the requirement that they park in the staff parking lot only. This notification should take the form of a letter to current staff members and should be provided to all incoming staff. The fact that a sizeable proportion of the population perceives parking as a problem should be explained to the staff at the Commander's Conference. The cooperation of all staff should not only be elicited, but periodic enforcement by the military police will ensure cooperation with this effort. There is no additional cost to this recommendation's adoption. Staff cooperation will alleviate the parking problem.

2. The medical and nursing staffs should be briefed on the findings of the study results on the Emergency Room. This should be followed by group sessions of Emergency Room personnel and the Chief, Outpatient Services to examine the data and see what measures it can take to raise the excellence of the service that they deliver. Periodic (semi-annual) re-evaluation of the perception of Emergency Room services rendered to the community should be conducted to keep the staff in touch with the public that it serves. This feedback should be incorporated in an on-going evaluation/review of the Emergency Room services by the staff and the Chief, Outpatient Services.

3. The Pharmacy Service waiting time problem should be brought to the attention of the Chief, Professional Services and the Chief, Pharmacy Services. The Pharmacy staff should meet and evaluate work methods and product flow to maximize efficiency, minimize delays and enhance patient satisfaction. Should scheduling of patients be a problem, the Ambulatory Patient Care Committee, along with the Pharmacy staff, should meet to even-out the flow of patients arriving at the Pharmacy for prescription services. Actions taken should be reported to, and monitored by, the Chief, Professional Services. Periodic re-evaluation by the Chief, Pharmacy Service is appropriate.

4. The Chief, Logistics Division should be advised of the findings of the perceived high state of cleanliness of the hospital. This should serve as positive feedback to the Housekeeping Department to keep up the good work and continue to fulfill the need for a hygienic environment.

5. The Executive Officer and the Chief, Patient Administration Division should be made aware of the perceptions of medical record's problems within the MEDDAC. The Chief, Patient Adminsitration Division should conduct an internal study to determine the problems in medical record's distribution at the hospital and clinics. Critical to this is the realization that there is the perception of a "problem". Periodic monitoring of medical records service by formal survey is appropriate and should provide accurate and meaningful feedback to management in addressing this problem.

6. It is recommended that a 6-week trial period of evening appointments for outpatients be instituted at Keller Army Hospital. This should include scheduling evening appointments one day per week from 1800-2000. The selected clinics recommended are Family Practice and OB-GYN as these are used most frequently by the population affected. If, after the trial period has expired there has been wide acceptance, consideration should be given to expanding the variety of clinics open for the evening schedule. On the other hand, should a lack of interest in the evening service prevade, termination of the experiment would be appropriate. Staff members required to work the two evening hours should start two hours later on the morning of that day, thus avoiding the need for extended work shifts or additional assets.

7. The strong interest by West Point and Stewart women in wellness activities, particularly of nutritionally oriented subjects, suggests

the need to initiate nutritional group instruction sessions on a trial basis. Should the response to these offerings be positive, an expanded selection of topics would be appropriate. However, should there be insufficient interest or attendance the program should not be renewed.

8. The command should have the Chief, Clinical Support Division conduct a patient satisfaction/opinion study to evaluate the perceived quality of care rendered to patients treated in the Physical Therapy Service. As the quantitative data gathered in this study was inconclusive, no further course of action can be recommended at this time. It should be noted however, that the women interviewed in the qualitative sessions all had strong negative feelings about this service. None of the women had anything in common except their mutual problems and perceptions of the Physical Therapy Service. This phenomenon therefore should be appropriately followed-up for possible future corrective action.

9. The medical and nursing staffs should be made aware of the findings of the perceived "professionalism" of the MEDDAC staff. This should be addressed in the Medical Care Evaluation Committee and Nursing Care Evaluation Committee which should make specific recommendations to their constituents. Additionally, the problem should be brought to the attention of the Command Sergeant Major for use in the education, training and development of the para-professional enlisted medical corpsmen.

10. It is recommended that the command study the feasibility of establishing Family Practice Medical Service at Stewart Army Sub-post. This study should address the alternatives of stationing one physician at that location full time, or establishing a part-time hospital based service. Additionally, an upgrade plan for the Stewart Clinic to adequately support a Family Practitioner must be addressed. The presence of the large number of families at Stewart, isolated from West Point by geography, mileage, and circumstance, requires more adequate support. Requirements, if any, for additional practitioners, should be addressed in the recommended study. The need has been well established.

11. Recommend that the Adjutant of the MEDDAC, as the Public Affairs Officer of the organization, coordinate on a regular basis with the West Point Public Affairs Office to establish and maintain a continuing program of meaningful newspaper articles and bulletin notices which will keep the community fully aware of the services of the hospital as well as functioning in a health promotion mode. Particular emphasis must be placed on articles targeted for the STAS population. These vehicles should be used to foster the awareness of those that are isolated from the main elements of the MEDDAC. As there is continuous turnover of personnel within the military community, especially among the junior personnel, the on-going nature of this program is essential.

12. The role of the patient representative needs to be reaffirmed. A newspaper article is an appropriate starting point. Carefully constructed signs informing patients where to go to make complaints or suggestions should tactfully be placed throughout the hospital. A more active role

of the patient representative, by making visits to waiting patients without complaints in outpatient areas and hospitalized inpatients is appropriate. The fostering of this key position can only serve to enhance the image of the MEDDAC in the eyes of the patient, but will serve as a sensitive management listening device for maintaining the pulse of patient MEDDAC relations.

13. Until such time as the Family Practice Service is established at Stewart, recommend that periodic specialty clinics be established at Stewart. A test period of six weeks with OB-GYN service available one afternoon every two weeks would be an appropriate starting point. Based on the response to the service, adjustments to the schedule should be made. The eventual provision of Family Practice Medicine at STAS will fulfill the need for more definitive health care services at Stewart.

FOOTNOTES

[1]Interview with George Rosenbaum, President, Leo Shapiro and Associates, Chicago, 15 September, 1981.

[2]Interview with LTC Bruce Miketinac, MSC, faculty member, Army-Baylor Graduate Program in Health Care Administration, West Point, New York, 9 September, 1981.

[3]Interview with Mrs. B. Picard, Deputy Director Office of the Director of Institutional Research, United States Military Academy, West Point, New York, 15 October, 1981.

[4]Interview with CPT(P) John Durkan, Chief Patient Administration Division, Keller Army Community Hospital, West Point, New York, 16 October, 1981.

[5]Interview with Ms P. Chick, Housing Division, United States Military Academy, West Point, New York, 28 October, 1981.

III CONCLUSIONS

Answering the Applied Research Question

This health care marketing study has established the fact that marketing and some of it's techniques can be used effectively in the military to deliver a better system of health care. By knowing the needs of the patients being served, the health care administrator can better manage the institution resources thus maximizing the benefits to its constituents.

The recommendations made to the Commander, West Point MEDDAC, if adopted, will foster the relationship between the medical treatment facility and it's community. Although this study was focused only on one market segment, the knowledge gained from it is far reaching. The multi-phase design of the endeavor allowed a thorough evaluation and re-affirmation of findings before specific recommendations were made.

Applicability

Based on the experience gained at West Point it is recommended that military health care administrators, in the three Armed Forces providing such services, implement marketing techniques to better align their management techniques with the perceived needs of their communities. Marketing efforts can help the provider gain an insight into who the patient is, and what the needs are (from his perspective). This can only foster understanding and mutual trust. Finally, the data gathered

in these marketing efforts can serve as a key control device in the health care delivery system. This control is therefore shared between the needs of the system as seen in a traditional manner by those within and the needs of the publics interacting within the systems milieu.

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APPENDIX A

SAMPLE LETTER REQUESTING INTERVIEW

DEPARTMENT OF THE ARMY
U. S. ARMY MEDICAL DEPARTMENT ACTIVITY
WEST POINT, NEW YORK 10996

REPLY TO
ATTENTION OF:

HSUD

February 1982

Dear :

In a concerted effort to assess the quality of health care provided by Keller Army Community Hospital, a research study has been initiated to determine the community's perceptions of our services and facilities. Your name has been selected as a possible participant in one phase of this study. As a resident spouse of a West Point service member, you are a most important part of the community and may well be able to help us look at ourselves.

Should you desire to participate in our study, we would like to interview you for approximately 30 minutes concerning your feelings about our hospital and the services that we provide. We are interested in obtaining candid information which will be kept in strict confidence (with all personal identity data removed.) Depending upon your preference, the interview may be conducted at the hospital or in your home, at virtually any reasonable time of day or evening. Consenting to give an interview is purely voluntary, however your participation Mrs. , would be most helpful in assisting us to see ourselves from the standpoint of those we are here to serve.

Interviews will be conducted during the latter part of February and early March. Please complete the inclosed response form and return it in the postage free envelope provided.

Thank you for your assistance. I sincerely appreciate your help in this endeavor. Additional information may be obtained from the project officer, Major Lyons, at 938-4837.

Sincerely,

A. Gordon Hennessy

A. GORDON HENNESSY
LTC(P), MSC
Executive Officer

1 Incl
as

APPENDIX B

INTERVIEWEE RESPONSE FORM

Qualitative Interview Response

1. _____I am willing to be interviewed as noted in LTC Hennessy's letter of 8 February 1982. A good time for the interview would be about _____. I prefer to be interviewed at (home) (Keller Army Hospital).

2. _____I would rather not be interviewed at this time.

Signature: _____

Address: _____

Tel #: _____

APPENDIX C

QUALITATIVE EVALUATION WORKSHEET (GUIDE)

HEALTH CARE MARKETING RESEARCH
USA Medical Department Activity
West Point, New York 10996

QUALITATIVE EVALUATION WORKSHEET (Guide)

I. Demographic Data

A. Dependent Wife of: Rank: Position:

B. # of years person interviewed has been affiliated with the Army:

C. Have you or your family been treated as:

1. An outpatient?

2. An inpatient?

3. Used CHAMPUS?

4. Other?

D. How long have you been at West Point?

E. Do you live at West Point or STAS?

II. Respondents Opinion

A. What do you think of health care services delivered by the West Point MEDDAC?

B. Product Examination

1. Do you feel that the services provided at West Point fulfill your personal needs? Why or why not? What should be done to improve them?

2. Do you feel that the health care services provided fulfill the needs of your family members? Why or why not? What should be done to improve them?

3. Should the MEDDAC provide different or additional services than those currently offered, if so, what?

4. Are you familiar with wellness activities? If yes, should wellness activities be provided by the MEDDAC, yes, no, why?

5. Do you or your family avoid using the West Point MEDDAC's services? If so, why, and what if anything could we do to meet your needs?

6. Are the services provided in a pleasant manner? Are there any aspects of the delivery encounter that are particularly good or in need of improvement?

7. What, in your opinion, is the quality of our health care services? What would make it better?

8. Is the quantity of health care services adequate? Do improvements need to be made? How?

9. Do you use CHAMPUS? Why or why not?

10. Do you ever pay for health care services in lieu of using the "free" services of the West Point MEDDAC?

11. What is your opinion of the health care providers at the West Point MEDDAC?

12. Is the staff competent?

13. Is the staff courteous?

14. Is the staff caring and dedicated?

15. What clinics of the MEDDAC do you use and what has been your experience in these clinics.

16. What is your opinion of the administrative services provided at the hospital?

17. Do you have any other specific comments about the services of the MEDDAC?

C. Place Examination

1. Are health care services provided in appropriate locations for you and your family? If not, what should be done to improve the situation?

2. Are health care services available at reasonable schedule times of the day? Are these times convenient for you and your family? If not, what should be done?

3. Are the waiting times for appointments for health services acceptable? If not, what should be done?

4. Is there a need to provide health services in other locations and at different times? If so, when and where?

5. If you could change any aspect of where and when health services are provided, what would you do?

6. Are the physical plants adequate for the proper delivery of health services? If not, what should be done for improvement?

7. Are there any aspects of the hospital or clinical environment that should be modified, improved or addressed in any manner? If yes, what areas and how?

4. What are the social costs to you and your family in using the West Point MEDDAC's services?

5. Is your or your families time a significant cost in obtaining our services? Does this differ significantly from the civilian sector?

6. Is CHAMPUS a viable alternative to Army Medical Care at West Point? Is cost a significant factor one way or the other?

8. Do you have any other feelings about the hospital or clinical environment not previously addressed?

D. Price Examination

1. What does it cost you or your family to use the West Point MEDDAC's services?

2. Do you feel that the monetary costs are: inexpensive, moderate, excessive, and why?

3. Do you feel that the services are free?

7. Are there any other aspects of financial or social costs that you would like to comment on?

E. Promotion Examination

1. In your opinion, does the West Point MEDDAC communicate with the community? Is it effective?

2. What should be done to improve this communication?

3. Is there a need for periodic community input into the MEDDAC to assist in making policy decisions? Is the input being provided? If so, is it representative? What should be done?

4. Are you and your family aware of all the services available at the MEDDAC? If so, how did you find out about them? Is there a better way that we could have used to provide this information to the community?

5. Does the MEDDAC have good or bad community relations? Why, or why not? What should be done?

6. Should more events, public presentations, forums, or other vehicles be used to foster hospital-community relations? If so, what type?

F. What do you like most about the MEDDAC? Why?

G. What do you like least about the MEDDAC? Why?

H. Is there anything else about the operation of any aspect of the MEDDAC that you have an opinion about that you would like to discuss?

APPENDIX D

DEPENDENT WIVES QUESTIONNAIRE

March 1982

DEPENDENT WIVES QUESTIONNAIRE
WEST POINT MEDDAC

Please answer the following questions, to the best of your ability, by circling the letter corresponding to your response. This information will help us better manage the MEDDAC and become more responsive to your needs and observations.

1. Have you been treated as a patient at any of the MEDDAC activities within the last two years?

a. Yes, as an outpatient only.

b. Yes, as an inpatient only.

c. Yes, as both an outpatient and inpatient.

d. No, I have not been treated at the West Point MEDDAC within the last two years.

2. Are you satisfied with the variety of services provided by Keller Army Community Hospital and the MEDDAC clinics?

a. Yes

b. No

c. Not sure

3. When visiting Keller Army Hospital (Bldg 900), is parking a problem?

a. Yes, it is a significant problem.

b. Yes, it is a minor problem.

c. No, it is not a problem.

d. I have not visited Keller Army Hospital by car.

4. If you have used the Keller Army Hospital Emergency Room, how would you rate the care and service that you receceived?

a. Excellent

b. Satisfactory

c. Unsatisfactory - Reason:

d. I have not used the Emergency Room.

5. When having a prescription filled at the Keller Army Hospital Pharmacy, the service and waiting time required is usually:

a. Excellent

b. Satisfactory

c. Unsatisfactory - Reason:

d. I have not used the pharmacy service.

6. When you went to Keller Army Hospital was it clean and maintained in a high state of hygiene?

a. Yes, cleanliness was excellent.

b. Yes, cleanliness was satisfactory.

c. No, cleanliness was unsatisfactory, comment:

d. I did not observe the cleanliness of the hospital or have not visited it.

7. When using the clinics of the MEDDAC, are your medical records delivered to and available at the clinic for your appointment?

a. Yes, almost without exception.

b. Sometimes, however I cannot rely on them being there.

c. Usually not, the records are not ordinarily at the clinic for my appointment.

d. I have not used the clinics.

8. Do you feel that there is a need for clinic schedules to include evening appointments?

a. Yes, I would definitely use them if available.

b. Yes, I might use them if available.

c. No, I have no need for evening appointments.

d. No opinion.

9. If you have been treated by the Physical Therapy Service in Building 606, how would you rate the services provided and the manner in which the care was delivered?

a. Excellent

b. Satisfactory

c. Unsatisfactory - Reason:

d. I have not used the PT services in Bldg 606.

10. If the hospital were to offer classes/lectures/groups on preventive medicine/health maintenance topics (i.e.: neutrition, smoking, sports, etc) would you participate or attend?

a. Yes, definitely

b. Maybe

c. No

11. How do you rate the professionalism of our staff?

a. Excellent in almost every respect.

b. Satisfactory

c. Unsatisfactory

d. I have not observed the staff.

12. While you were at Keller Army Hosptial, how was the food?

a. Excellent

b. Satisfactory

c. Unsatisfactory - Reason:

d. I did not eat at the hospital.

13. Are you satisfied with the West Point Family Practice Medicine service?

a. Yes, I am very satisfied.

b. Yes, I am somewhat satisfied.

c. No, I am not satisfied - Reason:

d. I do not participate in the Family Practice Service.

14. Should the MEDDAC do more to orient the community to the various activities of Keller Army Hospital?

a. Yes

b. No

c. No opinion

15. If you answered yes to question 14, which of the following would be appropriate and effective?

a. Tours/open-house days

b. Brochures/booklets

c. Public relations articles in the weekly Pointer View or notice in the Friday Daily Bulletin.

d. I did not answer yes to question #14.

16. Are you aware that if you have a complaint or suggestion to make concerning a MEDDAC related problem, that there is an individual or office to go to or call for help or resolution of the problem?

a. Yes

b. No

c. I have no idea.

17. Are you a West Point or STAS Resident?

a. West Point

b. STAS

c. Other

18. Please indicate any suggestions, comments or recommendations on how the West Point MEDDAC may better treat your health care needs.

Questions 19 thru 24 are for Stewart Army Subpost Residents Only.

19. Where do you go for your health care needs?

a. STAS Clinic

b. Keller Army Hospital

c. Both STAS Clinic and Keller Army Hospital

d. I do not use either.

20. Do you feel that there is a need for a family practice service at STAS?

a. Yes

b. No

c. No opinion

21. Does the physical separation of STAS and West Point prevent you or your family from obtaining proper health care services?

a. Yes, this is a significant problem for us.

b. Yes, this is a minor problem for us.

c. No, this is not a problem.

d. No opinion

22. Is there a need for periodic specialty clinics to be held at STAS?

a. Yes

b. No

c. No opinion

23. If you answered yes to #21, what clinics should be held periodically at STAS?

a. OB-GYN

b. Family Practice

c. Internal Medicine

d. Other, specify:

24. Is there a need for evening clinic hours at STAS?

a. Yes, there is a great need.

b. Yes, there is a small need.

c. No, evening hours are not necessary.

d. No opinion.

Thank you for taking the time to complete this questionnaire. Please feel assured that your response is a most valued part of our patient study. Kindly return the questionnaire to the Hospital in the enclosed postage free envelope immediately. No personal identification is required as this is an anonymous survey. Should you desire to discuss any related matter please contact MAJ Lyons at 938-4837.

APPENDIX E

SAMPLE LETTER SENT TO SURVEYED WOMEN IN QUANTITATIVE PHASE

DEPARTMENT OF THE ARMY
U. S. ARMY MEDICAL DEPARTMENT ACTIVITY
WEST POINT, NEW YORK 10996

REPLY TO
ATTENTION OF:

HSUD

date

name/address

Dear Mrs. name:

In a concerted effort to assess and improve the health care services provided to our patients, Keller Army Hospital is conducting a research study to determine the communities' feelings on a number of health related issues. Your name has been randomly selected to take part in the enclosed anonymous mail survey. I hope that you will take a few moments to complete the questionnaire and return it to the hospital in the postage free envelope provided.

As a member of the West Point or Stewart community you are a most important member of our patient population. Your input to this study is most significant as it provides us with direct patient communication which is a most valuable source of evaluation. This is your opportunity to help us take a good look at ourselves and express your preferences and observations which may be used in our management process.

Thank you for taking the time to assist us with this survey. Your help is sincerely appreciated.

Sincerely,

1 Incl
as

A. GORDON HENNESSY
LTC(P), MSC
Executive Officer

APPENDIX F

FREQUENCY DISTRIBUTIONS

[illegible] (CREATION DATE = 04/14/82)

[illegible] [illegible] AT MEDICAL IN LAST TWO YEARS

[illegible]	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible] ONLY	1.	51	67.1	67.1	67.1
[illegible] ONLY	2.	1	1.3	1.3	68.4
[illegible]	3.	18	24.7	24.7	94.7
[illegible]	4.	4	5.3	5.3	100.0
	TOTAL	76	100.0	100.0	

[illegible] CASES 76 MISSING CASES 0

87

	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	[illegible]	[illegible]	[illegible]	[illegible]
	2.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	3.	11	14.5	14.5	100.0
	TOTAL	76	100.0	100.0	

[illegible] CASES [illegible] MISSING CASES

Adjusting to delete NOT SURE
$n = 65$
1. $61/65 = 93.8\%$
2. $4/65 = 6.1\%$

	CODE	ABSOLUTE FREQ	VALID FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	2	2.9	4.2	4.2
[illegible]	2.	20	29.4	37.5	41.7
[illegible]	3.	41	60.3	54.2	95.8
[illegible]	4.	2	2.9	4.2	100.0
	.	1	1.5	MISSING	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 75 MISSING CASES 1

Adjusting to delete those who have not visited by CAR & no response

n = 72

1. = 4.2%

2 38.9%

3 56.9%

FILE [illegible] (CREATION DATE = 04/14/?2)

[illegible] EXCELLENT [illegible] EMERGENCY ROOM

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
EXCELLENT	1.	20	26.3	26.3	26.3
SATISFACTORY	2.	[illegible]	1[illegible]	1[illegible]	44.5
UNSATISFACTORY	3.	5	6.6	6.6	71.1
HAVE NOT USED IT	4.	22	28.9	28.9	100.0
	TOTAL	76	100.0	100.0	

VALID CASES [illegible] MISSING CASES [illegible]

Deleting those who have not used":
With $n = 76 - 22 = 54$
Exc & Sat = 91%

[illegible] (CUTOFF DATE = 04/14/82)

[illegible] TV AND WAIT TIME READ AT PHARMACY IS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
EXCELLENT	1.	13	17.1	17.1	17.1
SATISFACTORY	2.	44	57.9	57.9	75.0
UNSATISFACTORY	3.	12	15.8	15.8	90.8
DID NOT USE IT	4.	7	9.2	9.2	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 76 MISSING CASES 0

91

Deleting (4) have not used
n = 69
1. 13/69 = 17.3%
2. 44/69 = 63.8%
3. 12/69 = 18.8%

[illegible] (CREATION DATE = 04/14/82)

[illegible] HOW OFTEN PLEASED IN HI STATE OF HYGIENE

[illegible]	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	54	71.1	71.1	71.1
[illegible]	2.	20	24.3	26.3	97.4
[illegible]	3.	1	1.3	1.3	98.7
[illegible]	4.	1	1.3	1.3	100.0
	TOTAL	76	100.0	100.0	

[illegible] CASES [illegible] MISSING CASES [illegible]

FILE [illegible] (CREATION DATE = 04/14/80)

[illegible] FOOD PLANNED AND AVAILABLE AT CLINICS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	46	67.6	69.7	69.7
SOMETIMES	2.	16	23.5	24.2	93.9
USUALLY NOT	3.	2	2.9	3.0	97.0
CAN NOT USE IT	4.	2	2.9	3.0	100.0
	7.	2	2.9	MISSING	100.0
	TOTAL	68	100.0	100.0	

VALID CASES 66 MISSING CASES 2

93

Dietary supervision 65
and [illegible]

(FILE [illegible] (CREATION DATE = 04/14/92)

[illegible] FOR CLINICS TO HAVE SITE APPROVED

[illegible]	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
DEFINITELY OK	1.	19	25.3	25.	25.3
HIGH [illegible]	2.	24	34.7	36.5	61.8
[illegible] NEED	3.	22	30.7	30.7	92.0
[illegible] OPINION	4.	6	7.9	7.9	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 76 MISSING CASES 0

94

deleting "no opinion"
N = 70

FILE [illegible] (CREATION DATE = 04/14/83)

VE [illegible] PHYSICAL THERAPY SERVICES

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	5	6.4	6.8	6.8
ATI FACTORY	2.	7	9.5	10.5	17.1
[illegible]	..	61	82.9	82.9	100.0
	TOTAL	74	100.0	100.0	

VALID CASES [illegible] MISSING CASES 0

INSUFFICIENT DATA FOR ANALYSIS

(FILE [illegible] (CREATION DATE = 04/14/82)

VAR: [illegible] WHICH SOCIAL CLASS ETC SHOULD YOU BRING

(SOCIAL CLASS)	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible] (MIDDLE)	1.	21	27.6	27.6	27.6
UPPER	2.	36	47.4	47.4	75.0
[illegible]	3.	19	25.0	25.0	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 76 MISSING CASES 0

(CREATION DATE = 04/14/82)

[illegible] PROFESSIONALISM OF OUR STAFF

[illegible] LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	26	34.2	34.2	34.2
[illegible]	2.	39	51.3	56.5	90.7
[illegible]	3.	3	3.9	4.3	95.0
[illegible]	4.	8	10.5	11.6	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 76 MISSING CASES 0

97

deleting "not observed"
n = 67
1. 26/67 = 38.8%
2. 39/67 = 58.2%
3. 3/67 = 4.5%

[illegible] IN [illegible]

[illegible] (CONDITION DATE = 4/14/12)

[illegible] WHERE [illegible] AT HOSPITAL WOULD HAS FOOD

CATEGORY LABEL	CODE	ABSOLUT FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	[illegible]	[illegible]	[illegible]	[illegible]
ATI FACTORS	2.	12	21.4	21.7	[illegible]
[illegible] FAT THERE	4.	51	67.1	69.3	100.0
	5.	1	1.3	MISSING	100.0
	TOTAL	76	100.0	100.0	

VALID CASES [illegible] MISSING CASES 1

98

Delete 4, did not eat
n = 25

[illegible] (FAM PRCN DATA - 6/14/12)

[illegible] PHYSICIANS WITH FAMILY PRACTICE [illegible] SVC

CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
1.	24	31.6	31.6	31.6
2.	9	11.8	11.8	43.4
3.	1	1.3	1.3	44.7
4.	42	55.3	55.3	100.0
TOTAL	76	100.0	100.0	

[illegible] CASES [illegible] MISSING CASES 0

99

Delete (4) Do not Participate
n = 34
1. 24/34 = 70.6%
2 9/34 = 26.4%
1+3 combined 33/34 = 97.1%

FILE [illegible] (CASE TITE DATE = 04/14/82)

[illegible] SHOULD MORE BE DONE TO PROTECT COMMUNITY

CATEGORY LABEL	CODE	ACCOUNT FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	45	59.2	59.2	59.2
[illegible]	2.	9	11.8	11.8	71.1
[illegible] MISSING	9.	22	28.9	28.9	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 54 MISSING CASES 22

100

If (3) No opinion deleted
n = 54

1. 45/54 = 83.3%
2. 9/54 = 16.66%

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YOUR TC	1.	7	9.2	9.5	9.5
PROC YES ETC	2.	6	7.9	8.1	17.6
I NEEDLES ETC	3.	31	40.8	41.9	59.5
DON'T KNOW OR YES	4.	3	3.9	4.1	63.5
	5.	27	35.5	36.5	100.0
		2	2.6	MISSING	100.0
	TOTAL	76	100.0	100.0	

VALID CASES 74 MISSING CASES 2

101

Deleting (4) and Missing, $n = 44$

1. $7/44 = 15.9\%$
2. $6/44 = 13.6\%$
3. $31/44 = 70.5\%$

FILE [illegible] (CREATION DATE = [illegible])

[illegible] HELP FOR COMPLAINT OF SUGGESTION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
[illegible]	1.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	2.	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	3.	11	14.5	14.5	100.0
	TOTAL	76	100.0	100.0	

VALID CASES [illegible] MISSING CASES [illegible]

Combinin, ANSWERS 2 & 3
[illegible]/76 = 57.3%

102

DATE OF EARLIEST CONTACT WITH STAR RESIDENT	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
FIRST POINT	1.	47	64.4	64.4	64.4
OTHER	2.	27	37.0	37.0	101.4
[illegible]	3.	1	1.4	1.4	102.8
	TOTAL	75	102.8	102.8	

VALID CASES 73 MISSING CASES 2

FILE DSR2315 (CREATION DATE = 04/16/82)

VAR19 WHERE DO YOU GO FOR HEALTH CARE NEEDS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
STAS CLINIC	1.	1	3.7	3.7	3.7
KELLER HOSPITAL	2.	7	25.9	25.9	29.6
BOTH	3.	18	66.7	66.7	96.3
DO NOT USE	4.	1	3.7	3.7	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 27 MISSING CASES 0

DEPENDENT WIVES QUESTIONNAIRE

FILE DSR2315 (CREATION DATE = 04/16/82)

VAR20 NEED FOR FAMILY PRACTICE SERVICE AT STAS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	15	55.6	55.6	55.6
NO	2.	2	7.4	7.4	63.0
NO OPINION	3.	10	37.0	37.0	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 27 MISSING CASES 0

FILE DSR2315 (CREATION DATE = 04/16/82)

VAR21 SEPARATION KEEP YOU FROM RECVING CARE

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
SIGNIFICANT PBLM	1.	6	22.2	22.2	22.2
MINOR PROBLEM	2.	13	48.1	48.1	70.4
NOT A PROBLEM	3.	6	22.2	22.2	92.6
NO OPINION	4.	2	7.4	7.4	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 27 MISSING CASES 0

FILE DSR0315 (CREATION DATE = 04/16/82)

VAR22 NEED FOR PERIODIC SPCLTY CLINICS AT STAS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
YES	1.	22	81.5	81.5	81.5
NO OPINION	3.	5	18.5	18.5	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 27 MISSING CASES 0

delete "no opinion" and
$n = 22$
$\therefore$ yes = 100%

FILE DSR2315 (CREATION DATE = 04/16/82)

VAR23 IF YES TO 21,WHAT CLINICS SHOULD BE HELD

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
OB-GYN	1.	11	40.7	47.8	47.8
FAMILY PRACTICE	2.	10	37.0	43.5	91.3
OTHER	4.	2	7.4	8.7	100.0
	0.	4	14.8	MISSING	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 23 MISSING CASES 4

Delete no opinion.
n = 23
∴
1. 11/23 = 47.8%
2. 10/23 = 43.4%
4. 2/23 = 8.6%

FILE DSR0315 (CREATION DATE = 04/16/82)

VAR24 NEED FOR EVENING CLINIC HOURS AT STAS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
GREAT NEED	1.	8	29.6	30.8	30.8
SMALL NEED	2.	8	29.6	30.8	61.5
NOT NECESSARY	3.	3	11.1	11.5	73.1
NO OPINION	4.	7	25.9	26.9	100.0
	0.	1	3.7	MISSING	100.0
	TOTAL	27	100.0	100.0	

VALID CASES 26 MISSING CASES 1

Delete no opinion & no response.
n = 19
1. 8/19 = 42%
2. 8/19 = 42%
3. 3/19 = 11%

APPENDIX G

CHI SQUARE ANALYSIS; WEST POINT V. STEWART RESIDENTS

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR01 BEEN TREATED AT MEDDAC IN LAST TWO YEARS
* * * * * * * * * PAGE 1 OF 1

VAR17 (VAR01: COUNT / ROW PCT / COL PCT / TOT PCT)	OUTPATIENT ONLY 1.	INPATIENT ONLY 2.	YES AS BOTH 3.	NOT TREATED 4.	ROW TOTAL
1. WEST POINT	31	0	16	1	48
	64.6	.0	33.3	2.1	64.0
	60.8	.0	84.2	25.0	
	41.3	.0	21.3	1.3	
2. STAS	20	1	3	3	27
	74.1	3.7	11.1	11.1	36.0
	39.2	100.0	15.8	75.0	
	26.7	1.3	4.0	4.0	
COLUMN TOTAL	51	1	19	4	75
	68.0	1.3	25.3	5.3	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .360
CHI SQUARE = 8.01572 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0457

NUMBER OF MISSING OBSERVATIONS = 1

```
TRANSPACE REQUIRED..      150 WORDS
      5 TRANSFORMATIONS
      2 RECODE VALUES + LAG VARIABLES
     18 IF/COMPUTE OPERATIONS

CPU TIME REQUIRED..     .71 SECONDS


             77.  CROSSTABS      TABLES=VAR17 BY VAR01 TO VAR16
             78.  STATISTICS     1


***** GIVEN WORKSPACE ALLOWS FOR  1312 CELLS,   875 TABLES WITH     2 DIMENSIONS FOR CROSSTAB PROBLEM *****
```

FILE DSR231? (CREATION DATE = 04/16/82)

* * * * * C R O S S T A B U L A T I O N O F * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR01 BEEN TREATED AT MEDDAC IN LAST TWO YEARS
* * * * * PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	OUTPATIENT ONLY 1.	INPATIENT ONLY 2.	YES AS BOTH 3.	NOT TREATED 4.	ROW TOTAL
WEST POINT	1.	31	0	16	1	48
		64.6	.0	33.3	2.1	64.0
		60.8	.0	84.2	25.0	
		41.3	.0	21.3	1.3	
STAS	2.	20	1	3	3	27
		74.1	3.7	11.1	11.1	36.0
		39.2	100.0	15.8	75.0	
		26.7	1.3	4.0	4.0	
COLUMN TOTAL		51	1	19	4	75
		68.0	1.3	25.3	5.3	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .360
CHI SQUARE = 8.01572 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0457

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR02 SATISFIED WITH SVCS PROVIDED BY CLINICS
* PAGE 1 OF 1

VAR17	VAR02 COUNT / ROW PCT / COL PCT / TOT PCT	YES 1.	NO 2.	NOT SURE 3.	ROW TOTAL
1. WEST POINT	COUNT	42	3	3	48
	ROW PCT	87.5	6.3	6.3	64.0
	COL PCT	68.9	75.0	30.0	
	TOT PCT	56.0	4.0	4.0	
2. STAS	COUNT	19	1	7	27
	ROW PCT	70.4	3.7	25.9	36.0
	COL PCT	31.1	25.0	70.0	
	TOT PCT	25.3	1.3	9.3	
COLUMN TOTAL		61	4	10	75
		81.3	5.3	13.3	100.0

3 OUT OF 6 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.440
CHI SQUARE = 5.85084 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .0536

NUMBER OF MISSING OBSERVATIONS = 1

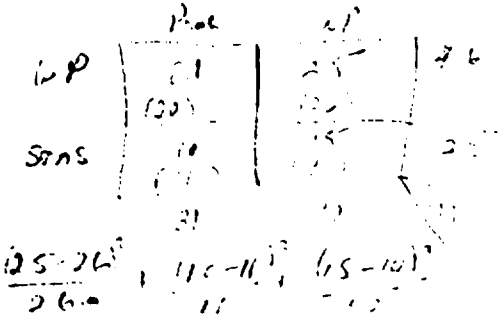
FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF * * * * * * * * * * * * * * * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR03 WHEN VISITING IS PARKING A PROBLEM
* PAGE 1 OF 1

		VAR03				
	COUNT / ROW PCT / COL PCT / TOT PCT	1.1 SIGNIFICANT PROBLEM	2.1 MINOR PROBLEM	3.1 NOT A PROBLEM	4.1 NOT VSTED BY CAR	ROW TOTAL
VAR17						
1. WEST POINT		2	19	25	2	48
		4.2	39.6	52.1	4.2	64.9
		66.7	67.9	62.5	66.7	
		2.7	25.7	33.8	2.7	
2. STAS		1	9	15	1	26
		3.8	34.6	57.7	3.8	35.1
		33.3	32.1	37.5	33.3	
		1.4	12.2	20.3	1.4	
COLUMN TOTAL		3	28	40	3	74
		4.1	37.8	54.1	4.1	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.054
CHI SQUARE = .21671 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .9748

NUMBER OF MISSING OBSERVATIONS = 2



FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * C R O S S T A B U L A T I O N O F * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR04 RATE CARE AND SVC RECD AT EMERGENCY ROOM
PAGE 1 OF 1

VAR17	VAR04 COUNT / ROW PCT / COL PCT / TOT PCT	EXCELLENT 1.	SATISFACTORY 2.	UNSATISFACTORY 3.	HAVE NOT USED IT 4.	ROW TOTAL
WEST POINT	1.	15	18	4	11	48
		31.3	37.5	8.3	22.9	64.0
		75.0	64.3	80.0	50.0	
		20.0	24.0	5.3	14.7	
STAS	2.	5	10	1	11	27
		18.5	37.0	3.7	40.7	36.0
		25.0	35.7	20.0	50.0	
		6.7	13.3	1.3	14.7	
	COLUMN TOTAL	20	28	5	22	75
		26.7	37.3	6.7	29.3	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.800
CHI SQUARE = 3.47842 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .3236

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR05 SVC AND WAIT TIME REQD AT PHARMACY IS
* PAGE 1 OF 1

VAR17	VAR05	1. EXCELLENT	2. SATISFACTORY	3. UNSATISFACTORY	4. HAVE NOT USED IT	ROW TOTAL
1. WEST POINT	COUNT	4	35	7	2	48
	ROW PCT	8.3	72.9	14.6	4.2	64.0
	COL PCT	36.4	79.5	53.8	28.6	
	TOT PCT	5.3	46.7	9.3	2.7	
2. STAS	COUNT	7	9	6	5	27
	ROW PCT	25.9	33.3	22.2	18.5	36.0
	COL PCT	63.6	20.5	46.2	71.4	
	TOT PCT	9.3	12.0	8.0	6.7	
COLUMN TOTAL		11 14.7	44 58.7	13 17.3	7 9.3	75 100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.520
CHI SQUARE = 12.65674 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0054

NUMBER OF MISSING OBSERVATIONS = 1

$$\frac{(39-32)^2}{37} + \frac{(17-9)^2}{9} + \frac{(16-15)^2}{18} + \frac{(6-4)^2}{4}$$

$$\frac{4}{37} + \frac{4}{9} + \frac{1}{18} + \frac{1}{4}$$

39	1	48
(37)	(9)	
16	6	
118	4	
55	13	

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR06 HOSPTL CLEAN AND IN HI STATE OF HYGIENE
* PAGE 1 OF 1

	VAR06				
COUNT / ROW PCT / COL PCT / TOT PCT	EXCELLENT 1.1	SATISFACTORY 2.1	UNSATISFACTORY 3.1	DID NOT OBSERVE 4.1	ROW TOTAL
VAR17					
1. WEST POINT	33 68.8 62.3 44.0	14 29.2 70.0 18.7	1 2.1 100.0 1.3	0 .0 .0 .0	48 64.0
2. STAS	20 74.1 37.7 26.7	6 22.2 30.0 8.0	0 .0 .0 .0	1 3.7 100.0 1.3	27 36.0
COLUMN TOTAL	53 70.7	20 26.7	1 1.3	1 1.3	75 100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .360
CHI SQUARE = 2.72209 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .4365

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR07 RCDS DELIVERED AND AVAILABLE AT CLINICS
* PAGE 1 OF 1

		VAR07				
	COUNT / ROW PCT / COL PCT / TOT PCT	1. YES	2. SOMETIMES	3. USUALLY NOT	4. HAVE NOT USED IT	ROW TOTAL
VAR17		1.1	2.1	3.1	4.1	
1. WEST POINT		34	13	0	1	48
		70.8	27.1	.0	2.1	65.8
		73.9	68.4	.0	16.7	
		46.6	17.8	.0	1.4	
2. STAS		12	6	2	5	25
		48.0	24.0	8.0	20.0	34.2
		26.1	31.6	100.0	83.3	
		16.4	8.2	2.7	6.8	
COLUMN TOTAL		46	19	2	6	73
		63.0	26.0	2.7	8.2	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .685
CHI SQUARE = 11.68026 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0086

NUMBER OF MISSING OBSERVATIONS = 3

	yes	Sometimes	
WP	34 (32)	13	47
STAS	12	6 (5)	18
	46	19	65

no sig difference

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR08 NEED FOR CLINICS TO HAVE NITE APTMNTS
* PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	VAR08: DEFINITELY USE 1.	MIGHT USE 2.	NO NEED 3.	NO OPINION 4.	ROW TOTAL
WEST POINT	1.	10	18	17	3	48
		20.8	37.5	35.4	6.3	64.0
		55.6	64.3	73.9	50.0	
		13.3	24.0	22.7	4.0	
STAS	2.	8	10	6	3	27
		29.6	37.0	22.2	11.1	36.0
		44.4	35.7	26.1	50.0	
		10.7	13.3	8.0	4.0	
	COLUMN TOTAL	18	28	23	6	75
		24.0	37.3	30.7	8.0	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.160
CHI SQUARE = 2.04949 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .5622

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR09 RATE PHYSICAL THERAPY SERVICES
* PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	EXCELLENT 1.	SATISFACTORY 2.	HAVE NOT USED 4.	ROW TOTAL
WEST POINT	1.	4	7	37	48
		8.3	14.6	77.1	64.0
		80.0	87.5	59.7	
		5.3	9.3	49.3	
STAS	2.	1	1	25	27
		3.7	3.7	92.6	36.0
		20.0	12.5	40.3	
		1.3	1.3	33.3	
COLUMN TOTAL		5	8	62	75
		6.7	10.7	82.7	100.0

3 OUT OF 6 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.800
CHI SQUARE = 2.97589 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .2258

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * C R O S S T A B U L A T I O N O F * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR10 HOSPITAL OFRD CLASSES ETC WOULD YOU ATND
* * * * * PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	VAR10: YES DEFINITELY 1.	MAYBE 2.	NO 3.	ROW TOTAL
1. WEST POINT	COUNT	12	22	14	48
	ROW PCT	25.0	45.8	29.2	64.0
	COL PCT	60.0	61.1	73.7	
	TOT PCT	16.0	29.3	18.7	
2. STAS	COUNT	8	14	5	27
	ROW PCT	29.6	51.9	18.5	36.0
	COL PCT	40.0	38.9	26.3	
	TOT PCT	10.7	18.7	6.7	
COLUMN TOTAL		20	36	19	75
		26.7	48.0	25.3	100.0

CHI SQUARE = 1.04268 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .5937

NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/15/82)

* C R O S S T A B U L A T I O N O F *

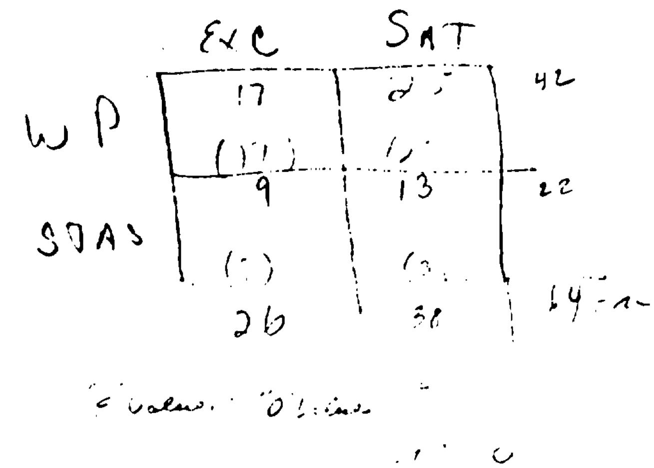
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR11 RATE PROFESSIONALISM OF OUR STAFF

* PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	EXCELLENT 1.1	SATISFACTORY 2.1	UNSATISFACTORY 3.1	NOT OBSERVED 4.1	ROW TOTAL
WEST POINT	1.	17	25	2	4	48
		35.4	52.1	4.2	8.3	64.0
		65.4	65.8	66.7	50.0	
		22.7	33.3	2.7	5.3	
STAS	2.	9	13	1	4	27
		33.3	48.1	3.7	14.8	36.0
		34.6	34.2	33.3	50.0	
		12.0	17.3	1.3	5.3	
COLUMN TOTAL		26	38	3	8	75
		34.7	50.7	4.0	10.7	100.0

3 OUT OF 8 (37.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.080
CHI SQUARE = .76426 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .8580

NUMBER OF MISSING OBSERVATIONS = 1



FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *

VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR12 WHILE YOU WERE AT HOSPITAL HOW WAS FOOD

PAGE 1 OF 1

VAR17 (COUNT / ROW PCT / COL PCT / TOT PCT)	VAR12: EXCELLENT 1.	SATISFACTORY 2.	DIDNT EAT THERE 4.	ROW TOTAL
1. WEST POINT	7	11	30	48
	14.6	22.9	62.5	64.9
	87.5	73.3	58.8	
	9.5	14.9	40.5	
2. STAS	1	4	21	26
	3.8	15.4	80.8	35.1
	12.5	26.7	41.2	
	1.4	5.4	28.4	
COLUMN TOTAL	8	15	51	74
	10.8	20.3	68.9	100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.811
CHI SQUARE = 3.08723 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .2136

NUMBER OF MISSING OBSERVATIONS = 2

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR13 SATISFIED WITH FAMILY PRACTICE MEDCN SVC
* PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	VAR13: VERY SATISFIED 1.	SOMEWHAT 2.	NOT SATISFIED 3.	DO NOT PARTCPATE 4.	ROW TOTAL
WEST POINT	1.	20	6	1	21	48
		41.7	12.5	2.1	43.8	64.0
		83.3	66.7	100.0	51.2	
		26.7	8.0	1.3	28.0	
STAS	2.	4	3	0	20	27
		14.8	11.1	.0	74.1	36.0
		16.7	33.3	.0	48.8	
		5.3	4.0	.0	26.7	
	COLUMN TOTAL	24	9	1	41	75
		32.0	12.0	1.3	54.7	100.0

3 OUT OF 8 (37.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .360
CHI SQUARE = 7.39047 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0604

NUMBER OF MISSING OBSERVATIONS = 1

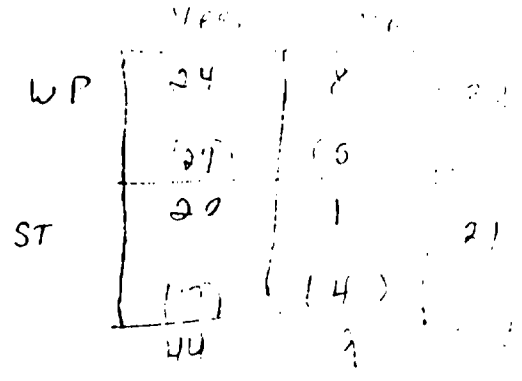
FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR14 SHOULD MEDDAC DO MORE TO ORIENT COMUNITY
* PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	VAR14 YES 1.	NO 2.	NO OPINION 3.	ROW TOTAL
1. WEST POINT		24	8	16	48
		50.0	16.7	33.3	64.0
		54.5	88.9	72.7	
		32.0	10.7	21.3	
2. STAS		20	1	6	27
		74.1	3.7	22.2	36.0
		45.5	11.1	27.3	
		26.7	1.3	8.0	
COLUMN TOTAL		44	9	22	75
		58.7	12.0	29.3	100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 3.240
CHI SQUARE = 4.85410 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .0883

NUMBER OF MISSING OBSERVATIONS = 1



$\frac{(24-21)^2}{21} + \frac{(8-5)^2}{5} = 2.13$

$\frac{9}{21} + \frac{9}{5} + \frac{9}{11} + \frac{9}{4}$

.333 + 1.8 + .33 + 2.25 = 4.81

Significance 0.0883

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR15 IF YES TO 14, WHICH WOULD BE EFFECTIVE
* PAGE 1 OF 1

VAR17	VAR15 COUNT / ROW PCT / COL PCT / TOT PCT	TOURS ETC 1.	BROCHURES ETC 2.	DB NOTICES ETC 3.	DIDNT ANSWER YES 4.	ROW TOTAL
WEST POINT	1.	3	2	19	24	48
		6.3	4.2	39.6	50.0	65.8
		42.9	33.3	63.3	80.0	
		4.1	2.7	26.0	32.9	
STAS	2.	4	4	11	6	25
		16.0	16.0	44.0	24.0	34.2
		57.1	66.7	36.7	20.0	
		5.5	5.5	15.1	8.2	
	COLUMN TOTAL	7	6	30	30	73
		9.6	8.2	41.1	41.1	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.055
CHI SQUARE = 7.21223 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0654

NUMBER OF MISSING OBSERVATIONS = 3

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

VAR17 ARE YOU A WEST POINT OR STAS RESIDENT BY VAR16 AWARE OF HELP FOR COMPLAINT OR SUGESTION

PAGE 1 OF 1

VAR17	COUNT / ROW PCT / COL PCT / TOT PCT	YES 1.	NO 2.	I HAVE NO IDEA 3.	ROW TOTAL
WEST POINT	1.	25	17	6	48
		52.1	35.4	12.5	64.0
		67.6	63.0	54.5	
		33.3	22.7	8.0	
STAS	2.	12	10	5	27
		44.4	37.0	18.5	36.0
		32.4	37.0	45.5	
		16.0	13.3	6.7	
COLUMN TOTAL		37	27	11	75
		49.3	36.0	14.7	100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 3.960
CHI SQUARE = .64376 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .7248

NUMBER OF MISSING OBSERVATIONS = 1

APPENDIX H

CHI SQUARE ANALYSIS; FAMILY PRACTICE PARTICIPANTS V. NON-FAMILY PRACTICE PARTICIPANTS

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR01 BEEN TREATED AT MEDDAC IN LAST TWO YEARS
PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	OUTPATIENT ONLY 1.	INPATIENT ONLY 2.	YES AS BOTH 3.	NOT TREATED 4.	ROW TOTAL
YES	1.	22	0	12	0	34
		64.7	.0	35.3	.0	44.7
		43.1	.0	60.0	.0	
		28.9	.0	15.8	.0	
NO	2.	29	1	8	4	42
		69.0	2.4	19.0	9.5	55.3
		56.9	100.0	40.0	100.0	
		38.2	1.3	10.5	5.3	
	COLUMN TOTAL	51	1	20	4	76
		67.1	1.3	26.3	5.3	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .447
CHI SQUARE = 5.98499 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .1123

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR02 SATISFIED WITH SVCS PROVIDED BY CLINICS
* PAGE 1 OF 1

		VAR02			
	COUNT / ROW PCT / COL PCT / TOT PCT	1.YES	2.NO	3.NOT SURE	ROW TOTAL
VAR25					
1. YES		29	2	3	34
		85.3	5.9	8.8	44.7
		47.5	50.0	27.3	
		38.2	2.6	3.9	
2. NO		32	2	8	42
		76.2	4.8	19.0	55.3
		52.5	50.0	72.7	
		42.1	2.6	10.5	
COLUMN TOTAL		61	4	11	76
		80.3	5.3	14.5	100.0

129

3 OUT OF 6 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.789
CHI SQUARE = 1.59585 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .4503

"E" values = 0 values

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR03 WHEN VISITING IS PARKING A PROBLEM
* PAGE 1 OF 1

VAR25	VAR03 COUNT / ROW PCT / COL PCT / TOT PCT	ISIGNIFIC IANT PBLM 1.	MINOR PR OBLEM 2.	NOT A PR OBLEM 3.	NOT VSTE D BY CAR 4.	ROW TOTAL
YES	1.	1	13	19	1	34
		2.9	38.2	55.9	2.9	45.3
		33.3	46.4	46.3	33.3	
		1.3	17.3	25.3	1.3	
NO	2.	2	15	22	2	41
		4.9	36.6	53.7	4.9	54.7
		66.7	53.6	53.7	66.7	
		2.7	20.0	29.3	2.7	
	COLUMN TOTAL	3	28	41	3	75
		4.0	37.3	54.7	4.0	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.360
CHI SQUARE = .37900 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .9445

NUMBER OF MISSING OBSERVATIONS = 1

	Prob yes	no	
FP yes	14 (14)	19 (19)	33
no	17 (17)	22 (22)	39
	31	41	72

"E" Values: "O"

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR04 RATE CARE AND SVC RECD AT EMERGENCY ROOM
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	VAR04 1. EXCELLENT	2. SATISFACTORY	3. UNSATISFACTORY	4. HAVE NOT USED IT	ROW TOTAL
1. YES	COUNT	11	12	3	8	34
	ROW PCT	32.4	35.3	8.8	23.5	44.7
	COL PCT	55.0	41.4	60.0	36.4	
	TOT PCT	14.5	15.8	3.9	10.5	
2. NO	COUNT	9	17	2	14	42
	ROW PCT	21.4	40.5	4.8	33.3	55.3
	COL PCT	45.0	58.6	40.0	63.6	
	TOT PCT	11.8	22.4	2.6	18.4	
COLUMN TOTAL		20 26.3	29 38.2	5 6.6	22 28.9	76 100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.237
CHI SQUARE = 2.07937 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .5561

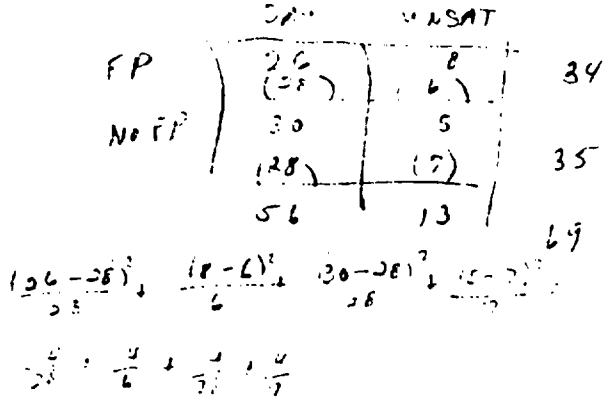
FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR05 SVC AND WAIT TIME REQD AT PHARMACY IS
* PAGE 1 OF 1

	VAR05				
COUNT / ROW PCT / COL PCT / TOT PCT	1. EXCELLENT	2. SATISFACTORY	3. UNSATISFACTORY	4. HAVE NOT USED IT	ROW TOTAL
VAR25					
1. YES	5 / 14.7 / 41.7 / 6.6	21 / 61.8 / 47.7 / 27.6	8 / 23.5 / 61.5 / 10.5	0 / .0 / .0 / .0	34 / 44.7
2. NO	7 / 16.7 / 58.3 / 9.2	23 / 54.8 / 52.3 / 30.3	5 / 11.9 / 38.5 / 6.6	7 / 16.7 / 100.0 / 9.2	42 / 55.3
COLUMN TOTAL	12 / 15.8	44 / 57.9	13 / 17.1	7 / 9.2	76 / 100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 3.132
CHI SQUARE = 7.35595 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0614

132



FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR06 HOSPTL CLEAN AND IN HI STATE OF HYGIENE
* PAGE 1 OF 1

		VAR06				
	COUNT / ROW PCT / COL PCT / TOT PCT	1. EXCELLENT	2. SATISFACTORY	3. UNSATISFACTORY	4. DID NOT OBSERVE	ROW TOTAL
VAR25						
1. YES		24	10	0	0	34
		70.6	29.4	.0	.0	44.7
		44.4	50.0	.0	.0	
		31.6	13.2	.0	.0	
2. NO		30	10	1	1	42
		71.4	23.8	2.4	2.4	55.3
		55.6	50.0	100.0	100.0	
		39.5	13.2	1.3	1.3	
COLUMN TOTAL		54	20	1	1	76
		71.1	26.3	1.3	1.3	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .47
CHI SQUARE = 1.84500 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .6052

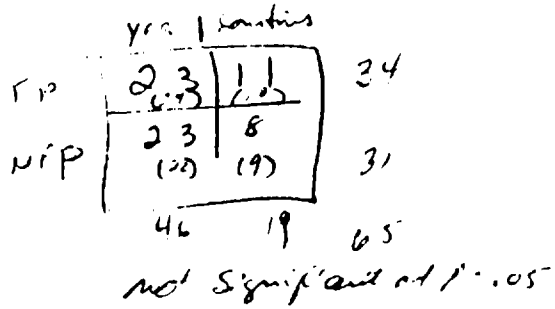
FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR07 RODS DELIVERED AND AVAILABLE AT CLINICS
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	VAR07 1. YES	2. SOMETIMES	3. USUALLY NOT	4. HAVE NOT USED IT	ROW TOTAL
1. YES		23	11	0	0	34
		67.6	32.4	.0	.0	45.9
		50.0	57.9	.0	.0	
		31.1	14.9	.0	.0	
2. NO		23	8	3	6	40
		57.5	20.0	7.5	15.0	54.1
		50.0	42.1	100.0	100.0	
		31.1	10.8	4.1	8.1	
COLUMN TOTAL		46	19	3	6	74
		62.2	25.7	4.1	8.1	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.378
CHI SQUARE = 9.04667 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0287

NUMBER OF MISSING OBSERVATIONS = 2



FILE DSR2315 (CREATION DATE = 04/16/82)

* C R O S S T A B U L A T I O N O F *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR08 NEED FOR CLINICS TO HAVE NITE APTMNTS
* PAGE 1 OF 1

VAR25	VAR08 COUNT / ROW PCT / COL PCT / TOT PCT	DEFINITE ILY USE 1.	MIGHT USE 2.	NO NEED 3.	NO OPINION 4.	ROW TOTAL
YES	1.	7	14	11	2	34
		20.6	41.2	32.4	5.9	44.7
		36.8	50.0	47.8	33.3	
		9.2	18.4	14.5	2.6	
NO	2.	12	14	12	4	42
		28.6	33.3	28.6	9.5	55.3
		63.2	50.0	52.2	66.7	
		15.8	18.4	15.8	5.3	
	COLUMN TOTAL	19	28	23	6	76
		25.0	36.8	30.3	7.9	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.684
CHI SQUARE = 1.19709 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .7537

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR09 RATE PHYSICAL THERAPY SERVICES
* PAGE 1 OF 1

	VAR09			
	COUNT / ROW PCT / COL PCT / TOT PCT	1. EXCELLENT	2. SATISFACTORY	4. HAVE NOT USED	ROW TOTAL
VAR25					
1. YES		4	4	26	34
		11.8	11.8	76.5	44.7
		80.0	50.0	41.3	
		5.3	5.3	34.2	
2. NO		1	4	37	42
		2.4	9.5	88.1	55.3
		20.0	50.0	58.7	
		1.3	5.3	48.7	
COLUMN TOTAL		5	8	63	76
		6.6	10.5	82.9	100.0

4 OUT OF 6 (66.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.237
CHI SQUARE = 2.91078 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .2333

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FILE   DSR2315  (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   VAR25     ARE YOU IN FAMILY PRACTICE?                          BY  VAR10     HOSPITAL OFRD CLASSES ETC WOULD YOU ATND
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                      VAR10
             COUNT   I
            ROW PCT  IYES DEFI MAYBE     NO         ROW
            COL PCT  INITELY                        TOTAL
            TOT PCT  I      1.I      2.I      3.I
VAR25       ---------I--------I--------I--------I
                 1.  I     9  I    21  I     4  I     34
  YES                I  26.5  I  61.8  I  11.8  I   44.7
                     I  42.9  I  58.3  I  21.1  I
                     I  11.8  I  27.6  I   5.3  I
                    -I--------I--------I--------I
                 2.  I    12  I    15  I    15  I     42
  NO                 I  28.6  I  35.7  I  35.7  I   55.3
                     I  57.1  I  41.7  I  78.9  I
                     I  15.8  I  19.7  I  19.7  I
                    -I--------I--------I--------I
            COLUMN        21       36       19        76
             TOTAL      27.6     47.4     25.0     100.0

CHI SQUARE =     7.03281 WITH   2 DEGREES OF FREEDOM   SIGNIFICANCE =   .0297
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FILE , DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR11 RATE PROFESSIONALISM OF OUR STAFF
* PAGE 1 OF 1

	VAR11				
COUNT / ROW PCT / COL PCT / TOT PCT	1.EXCELLENT	2.SATISFACTORY	3.UNSATISFACTORY	4.NOT OBSERVED	ROW TOTAL
VAR25					
1. YES	10	22	1	1	34
	29.4	64.7	2.9	2.9	44.7
	38.5	57.9	33.3	11.1	
	13.2	28.9	1.3	1.3	
2. NO	16	16	2	8	42
	38.1	38.1	4.8	19.0	55.3
	61.5	42.1	66.7	88.9	
	21.1	21.1	2.6	10.5	
COLUMN TOTAL	26	38	3	9	76
	34.2	50.0	3.9	11.8	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.342
CHI SQUARE = 7.34909 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0616

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	Exc	SAT	
FP	10	22	32
	(13)	(19)	
NFP	16	16	32
	(13)	(19)	
	26	38	64

$\frac{(10-13)^2}{13} + \frac{(22-19)^2}{19} + \frac{(16-13)^2}{13} + \frac{(16-19)^2}{19}$

$\frac{9}{13} + \frac{9}{19} + \frac{9}{13} + \frac{9}{19} =$

.692 + .473 + .692 + .473 = 2.33 not significant at .05 level

FILE DSR2315 (CREATION DATE = 04/16/82)

* C R O S S T A B U L A T I O N O F *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR12 WHILE YOU WERE AT HOSPITAL HOW WAS FOOD
* PAGE 1 OF 1

VAR25	VAR12 COUNT / ROW PCT / COL PCT / TOT PCT	EXCELLENT 1.	SATISFACTORY 2.	DIDNT EAT THERE 4.	ROW TOTAL
YES	1.	5	8	21	34
		14.7	23.5	61.8	45.3
		62.5	50.0	41.2	
		6.7	10.7	28.0	
NO	2.	3	8	30	41
		7.3	19.5	73.2	54.7
		37.5	50.0	58.8	
		4.0	10.7	40.0	
	COLUMN TOTAL	8	16	51	75
		10.7	21.3	68.0	100.0

2 OUT OF 6 (33.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.
MINIMUM EXPECTED CELL FREQUENCY = 3.627
CHI SQUARE = 1.44751 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .4849

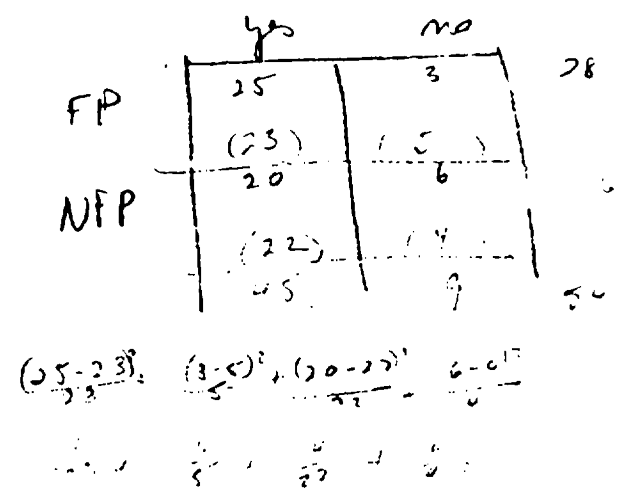
NUMBER OF MISSING OBSERVATIONS = 1

FILE DSR2315 (CREATION DATE = 04/16/82)

* C R O S S T A B U L A T I O N O F *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR14 SHOULD MEDDAC DO MORE TO ORIENT COMUNITY
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	VAR14: YES 1.	NO 2.	NO OPINION 3.	ROW TOTAL
YES	1.	25	3	6	34
		73.5	8.8	17.6	44.7
		55.6	33.3	27.3	
		32.9	3.9	7.9	
NO	2.	20	6	16	42
		47.6	14.3	38.1	55.3
		44.4	66.7	72.7	
		26.3	7.9	21.1	
	COLUMN TOTAL	45	9	22	76
		59.2	11.8	28.9	100.0

2 OUT OF 6 (33.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 4.026
CHI SQUARE = 5.31783 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .0700



FILE DSR2315 (CREATION DATE = 04/16/82)

* C R O S S T A B U L A T I O N O F *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR15 IF YES TO 14, WHICH WOULD BE EFFECTIVE
* PAGE 1 OF 1

VAR25	VAR15 COUNT / ROW PCT / COL PCT / TOT PCT	ITOURS ET IC 1.	BROCHURE S ETC 2.	DB NOTIC ES ETC 3.	DIDNT AN SWER YES 4.	ROW TOTAL
YES	1.	5	4	16	9	34
		14.7	11.8	47.1	26.5	45.9
		71.4	66.7	51.6	30.0	
		6.8	5.4	21.6	12.2	
NO	2.	2	2	15	21	40
		5.0	5.0	37.5	52.5	54.1
		28.6	33.3	48.4	70.0	
		2.7	2.7	20.3	28.4	
	COLUMN	7	6	31	30	74
	TOTAL	9.5	8.1	41.9	40.5	100.0

4 OUT OF 8 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.757
CHI SQUARE = 6.33983 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .0962

NUMBER OF MISSING OBSERVATIONS = 2

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR16 AWARE OF HELP FOR COMPLAINT OR SUGESTION
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	VAR16: YES 1.	NO 2.	I HAVE NO IDEA 3.	ROW TOTAL
YES	1.	14	14	6	34
		41.2	41.2	17.6	44.7
		37.8	50.0	54.5	
		18.4	18.4	7.9	
NO	2.	23	14	5	42
		54.8	33.3	11.9	55.3
		62.2	50.0	45.5	
		30.3	18.4	6.6	
	COLUMN TOTAL	37	28	11	76
		48.7	36.8	14.5	100.0

1 OUT OF 6 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 4.921
CHI SQUARE = 1.45410 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .4833

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR17 ARE YOU A WEST POINT OR STAS RESIDENT
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	VAR17 1. WEST POINT	2. STAS	3. OTHER	ROW TOTAL
	1.	27	7	0	34
YES		79.4	20.6	.0	44.7
		56.3	25.9	.0	
		35.5	9.2	.0	
	2.	21	20	1	42
NO		50.0	47.6	2.4	55.3
		43.8	74.1	100.0	
		27.6	26.3	1.3	
COLUMN TOTAL		48 63.2	27 35.5	1 1.3	76 100.0

2 OUT OF 6 (33.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .447
CHI SQUARE = 7.24746 WITH 2 DEGREES OF FREEDOM SIGNIFICANCE = .0267

TRANSPACE REQUIRED.. 60 WORDS
2 TRANSFORMATIONS
4 RECODE VALUES + LAG VARIABLES
2 IF/COMPUTE OPERATIONS

CPU TIME REQUIRED.. 3.22 SECONDS

```
74.  *SELECT IF      (VAR17 EQ 2)
75.  CROSSTABS       TABLES=VAR25 BY VAR19 TO VAR24
76.  STATISTICS      1
```

***** GIVEN WORKSPACE ALLOWS FOR 1312 CELLS, 875 TABLES WITH 2 DIMENSIONS FOR CROSSTAB PROBLEM *****

FILE DSR2315 (CREATION DATE = 04/16/82)

* CROSSTABULATION OF *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR19 WHERE DO YOU GO FOR HEALTH CARE NEEDS
* PAGE 1 OF 1

VAR25	VAR19 1. ISTAS CLINIC	2. KELLER HOSPITAL	3. BOTH	4. DO NOT USE	ROW TOTAL
1. YES	0	3	4	0	7
	.0	42.9	57.1	.0	25.9
	.0	42.9	22.2	.0	
	.0	11.1	14.8	.0	
2. NO	1	4	14	1	20
	5.0	20.0	70.0	5.0	74.1
	100.0	57.1	77.8	100.0	
	3.7	14.8	51.9	3.7	
COLUMN TOTAL	1	7	18	1	27
	3.7	25.9	66.7	3.7	100.0

6 OUT OF 8 (75.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .259
CHI SQUARE = 1.87347 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .5991

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FILE   DSR2315  (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   VAR25     ARE YOU IN FAMILY PRACTICE?                       BY  VAR20     NEED FOR FAMILY PRACTICE SERVICE AT STAS
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                       VAR20
             COUNT   I
             ROW PCT IYES      NO        NO OPINI   ROW
             COL PCT I                   ON         TOTAL
             TOT PCT I      1.I      2.I      3.I
VAR25        --------I--------I--------I--------I
                  1. I     5  I     0  I     2  I      7
  YES                I  71.4  I    .0  I  28.6  I   25.9
                     I  33.3  I    .0  I  20.0  I
                     I  18.5  I    .0  I   7.4  I
                    -I--------I--------I--------I
                  2. I    10  I     2  I     8  I     20
  NO                 I  50.0  I  10.0  I  40.0  I   74.1
                     I  66.7  I 100.0  I  80.0  I
                     I  37.0  I   7.4  I  29.6  I
                    -I--------I--------I--------I
            COLUMN       15        2        10        27
             TOTAL      55.6      7.4      37.0     100.0

    4 OUT OF      6 ( 66.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =    .519
CHI SQUARE =      1.31143 WITH   2 DEGREES OF FREEDOM   SIGNIFICANCE =   .5191
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FILE DSR2315 (CREATION DATE = 04/15/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR21 SEPARATION KEEP YOU FROM RECVING CARE
* PAGE 1 OF 1

VAR25	VAR21 COUNT / ROW PCT / COL PCT / TOT PCT	SIGNIFICANT PBLM 1.	MINOR PROBLEM 2.	NOT A PROBLEM 3.	NO OPINION 4.	ROW TOTAL
YES	1.	1	5	1	0	7
		14.3	71.4	14.3	.0	25.9
		16.7	38.5	16.7	.0	
		3.7	18.5	3.7	.0	
NO	2.	5	8	5	2	20
		25.0	40.0	25.0	10.0	74.1
		83.3	61.5	83.3	100.0	
		18.5	29.6	18.5	7.4	
	COLUMN TOTAL	6	13	6	2	27
		22.2	48.1	22.2	7.4	100.0

7 OUT OF 8 (87.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .519
CHI SQUARE = 2.29945 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .5126

FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR22 NEED FOR PERIODIC SPCLTY CLINICS AT STAS
* PAGE 1 OF 1

VAR25	VAR22 COUNT / ROW PCT / COL PCT / TOT PCT	YES 1.	NO OPINION 3.	ROW TOTAL
YES	1.	7 100.0 31.8 25.9	0 .0 .0 .0	7 25.9
NO	2.	15 75.0 68.2 55.6	5 25.0 100.0 18.5	20 74.1
	COLUMN TOTAL	22 81.5	5 18.5	27 100.0

2 OUT OF 4 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.296
CORRECTED CHI SQUARE = .81044 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = .3680
RAW CHI SQUARE = 2.14773 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = .1428

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FILE    DSR2315   (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   VAR25     ARE YOU IN FAMILY PRACTICE?                       BY  VAR23      IF YES TO 21, WHAT CLINICS SHOULD BE HEL
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     VAR23
            COUNT  I
           ROW PCT IOB-GYN   FAMILY P OTHER        ROW
           COL PCT I         RACTICE               TOTAL
           TOT PCT I      1.I      2.I      4.I
VAR25      --------I--------I--------I--------I
               1.  I     2  I     4  I     1  I      7
  YES              I  28.6  I  57.1  I  14.3  I   30.4
                   I  18.2  I  40.0  I  50.0  I
                   I   8.7  I  17.4  I   4.3  I
                  -I--------I--------I--------I
               2.  I     9  I     6  I     1  I     16
  NO               I  56.3  I  37.5  I   6.3  I   69.6
                   I  81.8  I  60.0  I  50.0  I
                   I  39.1  I  26.1  I   4.3  I
                  -I--------I--------I--------I
           COLUMN       11       10        2        23
            TOTAL     47.8     43.5      8.7     100.0

    4 OUT OF      6 ( 66.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =    .609
CHI SQUARE =      1.57378 WITH   2 DEGREES OF FREEDOM   SIGNIFICANCE =   .4553

NUMBER OF MISSING OBSERVATIONS =        4
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FILE DSR2315 (CREATION DATE = 04/16/82)

* * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * *
VAR25 ARE YOU IN FAMILY PRACTICE? BY VAR24 NEED FOR EVENING CLINIC HOURS AT STAS
* PAGE 1 OF 1

VAR25	COUNT / ROW PCT / COL PCT / TOT PCT	GREAT NEEDED 1.	SMALL NEED 2.	NOT NECESSARY 3.	NO OPINION 4.	ROW TOTAL
YES	1.	2	3	0	2	7
		28.6	42.9	.0	28.6	26.9
		25.0	37.5	.0	28.6	
		7.7	11.5	.0	7.7	
NO	2.	6	5	3	5	19
		31.6	26.3	15.8	26.3	73.1
		75.0	62.5	100.0	71.4	
		23.1	19.2	11.5	19.2	
	COLUMN TOTAL	8	8	3	7	26
		30.8	30.8	11.5	26.9	100.0

5 OUT OF 8 (62.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = .808
CHI SQUARE = 1.58485 WITH 3 DEGREES OF FREEDOM SIGNIFICANCE = .6628

NUMBER OF MISSING OBSERVATIONS = 1

DTIC

FILMED

3-89